

CLOSING THE GENDER PROFIT GAP?

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Abstract

We examine the impact of providing access to mobile savings accounts and improving financial management skills on the performance of microenterprises in Mozambique. The effects are highly heterogeneous: combining both types of support is associated with a large increase in both short and long-term firm profits and in financial security for female microentrepreneurs. This allowed female-headed microenterprises, particularly those with a higher level of profits at baseline, to close the gender profit gap in performance and skills relative to their male counterparts. The main drivers of improved business performance are improved financial management practices (book-keeping), an increase in accessible savings, and reduced transfers to friends and relatives. Providing access to mobile money as a tool to save and manage finances also increases long-term profits of female microentrepreneurs, particularly for those with higher profits at baseline. But neither treatment has any impact on male-led enterprises. Uncovering this heterogeneity in impact across different types of microenterprises can help improve the targeting of these interventions in the future.

Keywords: Microenterprise development, management, gender, mobile money, financial literacy, economic development.

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1 Introduction

Over 50% of the urban poor are currently engaged in some form of micro, non-agricultural business.¹ A striking fact about self-employment, particularly in the developing world, is the persistence of a substantial business performance gap between male and female microentrepreneurs (Nix et al, 2015; Hardy and Kagy, 2018). In fact, female-led businesses often report less than half of male-led business profits (Kalleberg and Leicht, 1991; Bird and Sapp, 2004; Doering and Thebaud, 2017), even when operating in similar sectors as their male counterparts (Hardy and Kagy, 2018). While there might be several drivers of this gender profit gap, this paper focusses on two key supply-side constraints to business performance that have been identified in the literature as being particularly binding for female microentrepreneurs: limited access to capital (Bruhn and Love, 2009; Collins et al, 2009; de Mel et al, 2010) and lack of exposure to financial management *know how* (Rosenthal and Strange, 2012; Field et al, 2016; McKenzie and Woodruff, 2017; McKenzie, 2020).

A potential strategy for microentrepreneurs to overcome capital constraints is to save. Increasing savings can allow them to optimize their cash flows, build long-term financial and business assets (Ashraf et al, 2005; Collins et al, 2009) and, consequently, improve the performance of their businesses. Female vendors may, however, face binding constraints in accessing savings products in the formal banking sector due to a higher opportunity cost of time, restricted mobility and lower levels of financial literacy to interact with the banking system.

One possible way of overcoming this constraint is through mobile money, leveraging the well-documented exponential rates of cell phone adoption in the developing world (Jack and Suri, 2014).² But the impact of mobile technology on microenterprise performance is also theoretically ambiguous. Mobile money can facilitate payments to suppliers and payments from clients by enabling low-cost payment services over easily accessible cell phones (Plyer et al,

¹The ILO estimates that 78% of the world's poor living in low-income countries is currently self-employed (ILO 2017).

²In our setting in Mozambique, there are over five million cell phone subscribers (close to one fourth of the population), and the geographic coverage of existing cell operators extends to almost 80% of the country.

2010), and it can also enable savings that help female microenterprises smooth investment, accumulate long-term assets and increase profits (Collins et al, 2009; Jack and Suri, 2014; Mbiti and Weil, 2016).³ On the other hand, mobile money can reduce the cost of these savings being dissipated in the form of transfers to family or other non-income generating types of consumption. Both of these effects can be exacerbated for female microentrepreneurs who tend to lack access to traditional banking and who may be more heavily taxed by their relatives, or even by their husbands (Fafchamps et al, 2014, Bernhardt et al., 2019 and Solene et Ng, 2020). While the effect of mobile money on household savings has been documented in the literature⁴, its impact on business savings and performance have received far less attention.

Lack of financial management skills can also compromise female-led microenterprises' growth through several channels.⁵ It can reduce savings, investment, prevent the introduction of new products, the management of inventories and the optimization of cash flows. Financial management skills can then improve the forecasting of revenue, expenditures and profit through improved book-keeping practices. But the evidence on the impact of financial literacy and business management training interventions on microenterprise performance has shown sometimes positive (Klinger and Schuelden, 2011; Blattman et al., 2016; Bloom et al, 2010; Field et al., 2016; McKenzie and Puerto, 2020) and sometimes negative or zero effects (Karlan and Valdivia, 2010; Drexler et al., 2014; Fiala, 2018).

One potential reason for these mixed results is that studies often combine potentially heterogeneous effects on female and male microentrepreneurs but also because releasing just one of these constraints may not be enough to improve business performance. Increasing profits and financial security may require both the tools to save and the *know how* to best manage

³Evidence from Mbiti and Weil (2016) and Jack and Suri (2014) suggests that mobile money is associated with an increase in formal savings of households by reducing the cost of safely storing money and reducing over-reliance on other less efficient forms of informal savings.

⁴Recent evidence suggests that accessing financial resources through individual mobile accounts can help increase household savings (Suri and Jack, 2016; Riley, 2020) as it provides women with more control over their finances.

⁵Female microentrepreneurs often have less exposure to good management practices, fewer business networks and business role models, and more limited levels of formal education (Bruhn and Love, 2009; Collins et al, 2009; de Mel et al, 2010; Rosenthal and Strange, 2012).

these savings and invest for future business growth.

This paper tests both the independent and the combined effects of releasing constraints on access to savings and business *know how* on closing the gender profit gap through a three-arm field experiment involving 1,270 microentrepreneurs operating in formal urban markets in Mozambique.⁶ Motivated by the potential importance of accessible savings as a strategy to overcome capital constraints, one of our treatment arms provides access to a mobile money account with a temporary but high-powered incentive to save.⁷

The second treatment arm in our study tests the impact of providing business management training, with a particular emphasis on separating household and business accounts, on cash flow management, book-keeping and on the implications of transfers to relatives. This training course was delivered across four one-hour in-person training modules, and it followed a standard rules of thumb approach (Drexler et al, 2010), drawing on visual illustrations and examples from everyday market situations to ensure that participants understood how to apply the training to their day-to-day business activities.⁸ The third treatment arm combines both treatments to test for complementarity.

To understand the differential effect of the treatments on female-led microenterprises we stratified our sample by the gender of the microentrepreneur. This design allows us to: i) document the profitability gap between male and female microentrepreneurs at baseline; ii) examine the differential impact of our interventions on each group⁹; and iii) examine whether the interventions can affect the profitability gap by comparing the differences in performance between female microentrepreneurs in the treatment groups and male microentrepreneurs in the control group at the end of the study. This will enable us to document whether the interven-

⁶The sector breakdown is food retail (55%), nonfood retail (clothes, household items, 31%) and services (restaurants, 14%).

⁷Participants earned a bonus equivalent to 5% of their average monthly mobile savings for the three months that followed the opening of their accounts.

⁸This intervention also provided a manual and a comic book illustrating the main concepts taught for future reference.

⁹Despite an initial female disadvantage, it is unclear which group is more likely to have the highest returns to our interventions. Female-led microenterprises may be farther from the productivity frontier, but their male counterparts may be better placed to take advantage of both interventions due to improved client and supplier networks, or higher initial levels of capital and savings.

tions levelled the playing field between female and male microentrepreneurs. We measure the impact of the interventions on profits and on financial security through an in-person survey 12 months after the intervention, and a phone survey 6 years later.

While the literature has tested these interventions independently, to the best of our knowledge, this is the first paper to examine effects by gender and to test for complementarity in a unified setting, in a stratified sample of male and female microentrepreneurs operating in the same markets.

We find that twelve months following the interventions, the combined treatment is the only one that led to a significant increase in profits for female microentrepreneurs. Both the combined treatment and the mobile money treatment are, however, also associated with higher levels of household financial security (a 7% increase relative to the control mean). This is measured through an index capturing whether in the previous 12 months, anyone in the household went without food and if the microentrepreneur was able to pay for children's schooling expenses. The effect on profits persists and grows in the following 5 years, representing a doubling of profits for the combined treatment group relative to the control, particularly for female microentrepreneurs in the right tail of the baseline profit distribution. But in the long-run, even the mobile money treatment on its own increased firm profits, but mostly for female microentrepreneurs who started off with higher levels of profits at baseline. Financial management training on its own appears to have had no significant impact on business performance in either the short or long-run.

The key mechanisms behind these treatment effects were a sustained improvement in financial management knowledge and practices such as book-keeping, lower remittances¹⁰, and higher savings in more liquid and potentially safer mobile money accounts. Mobile money also appears to have enabled female micro-entrepreneurs to better track their finances even in the absence of any business training: in fact, the share of transactions representing balance checks is higher in the mobile money treatment group by at least a factor of 2 relative to the

¹⁰Our baseline survey revealed that there is limited perceived reciprocity with regards to family transfers so our documented transfers are unlikely to be a form of social insurance.

other experimental groups.¹¹ Mobile money accounts were used primarily to store money and make remote payments to an electricity company, as opposed to making payments to suppliers (wholesalers) or receiving payments from clients. Ensuring timely payments of electricity is key for the day-to-day operations of these businesses.

Male microentrepreneurs learn from our financial management training programme and they improve their book-keeping practices. They also take up the mobile money service but they are less likely to report replacing traditional bank savings with mobile money savings. Despite these positive effects associated with the interventions, we observe no real changes in profits or financial security suggesting that our interventions did not address the constraints that bind the growth of male-led microenterprises.

Our findings underscore the importance of accessing an enabling technology to build savings and make payments on increasing microenterprise profits, particularly when associated with financial management skills that focus on how these savings can be applied to maximize business returns. When targeted to female microentrepreneurs, these interventions can help close the gap in knowledge and business performance relative to their male counterparts. For female entrepreneurs with higher profits to begin with, even just providing access to mobile savings can lead to a long-run increase in profits. This heterogeneity in impact highlights the importance of targeting specific types of microentrepreneurs with different interventions in order to maximize their cost-effectiveness.

Our findings contribute to several literatures. First, our work complements a growing literature on the importance of savings for business growth. Most interventions that have attempted to improve savings behavior independently have achieved mixed results (Dupas and Robinson, 2013; Dupas et al, 2016; Dupas et al, 2018; Fox and Thomas, 2016; Brooks et al, 2018; Schaner, 2018; Riley, 2020). At the same time, experimental studies have documented zero returns to capital for female-led microenterprises (De Mel, McKenzie and Woodruff, 2008, 2009b; Fafchamps et al., 2014) so releasing the capital constraint alone via savings or cash transfers may not al-

¹¹We do not find any changes in expectations and beliefs about the future performance of the businesses suggesting that an increase in confidence or optimism imparted by our training is unlikely to be driving our results.

ways suffice. Our results suggest that access to mobile individual saving accounts with short-run high powered incentives to save can have a sizable effect on microenterprise profits in the long-run, particularly when combined with improved business management practices in order for microentrepreneurs to make the best possible use of these resources.

Second, we add to a literature on the importance of access to mobile technology in the developing world. We provide new evidence on how mobile savings accounts can drive business performance, complementing results from studies that have documented the impact of mobile money on household finance, remittances, internal migration and educational and agricultural investment (Jack and Suri, 2014; Jack and Habyarimana, 2018; Batista and Vicente, 2017, 2018, 2020). This is likely to be driven by the fact that mobile savings are both liquid and safe (Riley, 2020), and allow users to better manage their savings.

Third, we contribute to the literature on the role of financial management capabilities on microenterprise growth. The evidence on the effectiveness of business training programmes to date is mixed (Karlan, Knight, and Udry, 2015; Bruhn, Karlan, and Schoar, 2018; McKenzie, 2020; Horn et al, 2020). Our findings suggest that imparting financial management skills to female microentrepreneurs can help close the gender profit gap, but only when coupled with the tools that enable microentrepreneurs to put such learnings into practice and invest towards business growth (McKenzie and Woodruff, 2017). Moreover, our findings are consistent with the importance of a rules of thumb approach to teaching financial management (Drexler et al, 2014; Arraiz et al, 2019). We further highlight the channels for improved performance such as improved book-keeping and reduced transfers to relatives.

We also contribute descriptively to the literature on the impact of transfers to relatives. In particular, we document low expectations about the reciprocity associated with these transfers and how business training can curb contributions to this “family tax”.

The paper proceeds as follows: in section 2 we describe the setting of our experiment; section 3 presents the empirical analysis while section 4 discusses how the interventions helped close the performance gap between male and female-led microenterprises. Section 5 con-

cludes.

2 Empirical Setting

2.1 Study Location, Population and Sampling

Our sample of 1,270 market vendors was drawn from 23 urban markets in the Mozambican capital, Maputo.¹² All markets had relatively good accessibility and proximity to both residential and industrial areas, so lack of access to wholesale markets and to centres of demand do not represent significant constraints to business in our setting. Vendors can operate their businesses as a stall or as a store¹³, both of which have a fixed location in the market and are traditionally engaged in general retail activities (selling produce, food or general groceries) or services (sewing, shoemaking and restaurants).¹⁴

We stratified our sample based on the gender of the participant and on the type of establishment (stall vs store). Our sample was then randomly assigned to four experimental groups, within each stratum.

2.2 Interventions

Mobile Money: We took advantage of the early stages of the roll-out of mobile money by Mozambique's largest cell operator to generate exogenous variation in access to mobile money. We opened a mobile money account and enrolled all the participants in this treatment arm in an incentive scheme for savings that provided a bonus corresponding to 5% of the average monthly

¹²Greater Maputo has 120 markets located in low-income neighborhoods, where they are the primary hubs of economic activity. Our analysis is restricted to formal vendors, which we classify as having paid an annual fee to operate within the area that they are assigned to in the market.

¹³See Appendix Figure A1.

¹⁴To obtain a sampling frame, we first generated detailed maps of each market with the location of each block of stalls/stores. We then split the market area into quarters and surveyors would randomly identify participants alternating between rows of stalls/stores within each quarter of the market, so that all participants would have at least one aisle of stores between them as a buffer area. In most markets the distance was significantly larger than just one aisle.

amount of savings kept in the mobile account (Schaner, 2018).¹⁵ This bonus was restricted to the first 3 months from account opening.¹⁶

Financial Management Training: The aim of the financial management training was to introduce vendors to basic concepts of financial management and book-keeping. It was conducted during four one-hour visits, during work time but off-peak hours, with visits spaced four weeks apart. The training took place at the establishment, and the training staff ensured that the opportunity cost of the training was low by allowing respondents to interrupt and continue to interact with clients. The first session focussed on the difference between business costs and household expenditures, revenue and profit, the importance of savings and investment and how to deal with requests for transfers from relatives and friends. The second session discussed the theory and practice of how to prepare a budget and the importance of book-keeping. All the participants received three different books to record inventories for the main products, sales on credit and the basic components of a budget (total expenditures and total sales). The last two sessions revisited the materials covered in previous sessions and clarified any questions. All the participants received a manual with the core teachings as consultation material and we designed and distributed a comic book written in colloquial Portuguese embedding the core learnings into everyday scenes in the market, drawn by a local Mozambican artist.¹⁷

During each visit, enumerators checked the books to see if they were being adequately filled in. By the end of the fourth visit, we provided 150 meticaïs (equivalent to 6 USD or 0.5% of average monthly revenue) if the books were filled in correctly and 75 meticaïs (equivalent to 3 USD) if the books were in the business but were incomplete. This financial management training followed a “rules of thumb” approach to teaching concepts (Drexler et al, 2014; Arraiz et al., 2019), and relied heavily on teaching by analogy and by way of examples from everyday

¹⁵The vendors in this experimental group received a leaflet explaining the bonus: they would receive 5 meticaïs (0.2 cents at the 2014 exchange rate) for each 100 meticaïs (4 USD) they kept in their accounts for an entire month.

¹⁶All the participants received basic training on how to use their mobile money accounts. Our trainers transferred a small amount of 50 meticaïs (2 USD) for them to practice how to receive and access funds in their account. Beneficiaries also learned the location of the mobile money agent in the market, where they could make cash-ins and cash-outs from their accounts.

¹⁷Berg and Zia (2013) find that story-telling can be an effective way of teaching about debt management.

life in the markets.¹⁸

Combined Treatment: Participants received both the financial management training and the mobile money treatments at the same time.

2.3 Data

To examine treatment effects we rely on a combination of survey and administrative data from the mobile money operator. The baseline and the first endline surveys were conducted 12 months apart (in July 2014 and July 2015), face-to-face. The final endline survey was conducted over the phone six years after the baseline, in 2020.

Administrative data on mobile money transactions were collected between 2014-2018, and included all the transactions and average balances kept in the mobile accounts for all groups.¹⁹ The treatment groups are balanced across treatment and control, and across survey waves, despite significant attrition in the final endline survey.²⁰

The majority of businesses (89%) are owner-managed and the average age of businesses is approximately 10 years. Most businesses keep inventory that would allow them to continue selling for on average of 20 days and the main types of investments microentrepreneurs have engaged in during the preceding six months is the introduction of new products. This is also the stated preferred type of investment microentrepreneurs would like to pursue in the following six months. Approximately half of the sample had previous business experience and the majority of respondents funded their business with their own savings (75%), highlighting the critical role of savings for capital investments.

¹⁸For a detailed description of the training materials see Appendix Figures A6 through A13.

¹⁹We obtained the mobile phone numbers associated with the mobile money accounts of all participants at baseline, and we repeated this exercise in the endline survey (including the control group). Note that we received the administrative data, de-identified at the end of the project, eliminating the need for consent and thus the possibility of Hawthorne effects or measurement error.

²⁰Tables A1 and A2 in the Appendix show balance across comparison groups for both endline samples in 2015 and in 2020. Tables A3 through A5 show that attrition at both of the two endlines, while particularly pronounced for the 2020 endline survey, was fairly balanced. In our main analysis we control for any characteristics in which those who remain in the sample differ from those who exit the sample (eg: age of establishment, productive assets, inventory). Table A8 shows that firm survival rates between baseline and 2020 were also similar across treatments for both genders.

At baseline, while overall savings levels are similar between female and male microentrepreneurs there are important compositional differences: men are more likely to have access to traditional banking but females are more likely to engage in informal savings practices such as savings groups in the market. Despite comparability in levels, keeping funds in savings groups is significantly more restrictive and less liquid than keeping funds in traditional banking accounts. Female-managed businesses also started with lower capital investments and they reported lower levels of investment in new products in the preceding six months, as well as lower monthly expenditures and lower monthly sales.²¹

Levels of numerical literacy differed significantly across female and male microentrepreneurs: women scored 4% lower in a simple applied arithmetic exercise that involved calculating additions, subtractions and discounted prices in the marketplace, and they were 15% less likely to keep consistent book-keeping.²²

Female microentrepreneurs do not, however, appear to have different objectives for their businesses or different levels of commitment: they report similar intentions to invest, similar objectives for savings and are even more optimistic in terms of the future growth prospects of their businesses than their male counterparts at baseline. When asked about their goals when saving, they are just as likely to prioritize saving for their business over saving for their children's education or to cope with health shocks.²³

²¹Tables A6 and A7 in the Appendix show further differences between female and male-owned microenterprises at baseline.

²²The numerical literacy index captures correct answers to four applied numeracy questions including “If you go to the wholesale market and a given product costs 6 Meticaïs, how much do you have to pay if you buy three of them?”; “If you save 500 meticaïs in the bank and one day you withdraw 200 meticaïs how much will you have left in your account?”; “If you borrow 1000 meticaïs from the bank with a 5% interest rate, how much will you pay in interest in the first year?”; and “Suppose you go to the market and the vendor offers you a 40% discount on a product that costs 100 meticaïs. How much will you have to pay?”

²³See Figure A2 in the Appendix.

3 Empirical Analysis

Given the stratified random assignment of our interventions, we can obtain unbiased estimates of their effect by estimating the following equation for each subgroup of microentrepreneurs:

$$y_i^E = \alpha_i + \beta_1 FL_i + \beta_2 (FL+MM)_i + \beta_3 MM_i + \gamma X_i + \delta y_i^B + \epsilon_i \quad (1)$$

where y_i^E is the endline value of an outcome variable of interest (e.g. profit or financial security), i indexes microenterprises and α_i denotes market fixed effects. X_i is a matrix of baseline measured covariates including an indicator on whether the microentrepreneur operates a stall or a store, the number of employees, baseline numerical literacy, an indicator capturing familiarity with a cell phone, the age of the establishment, inventory size at baseline, the entrepreneurs' previous experience as a business owner, baseline levels of book-keeping and whether the entrepreneur has given/received a loan from a family member in the year prior to the intervention. The control group is the omitted category in all specifications. The baseline measure of the outcome variable y_i^B explains a substantial share of the variance in outcomes across individuals and is included in the specification.

3.1 Impact on Profits and Financial Security

Table 1 presents the effect of each intervention on profits, with Panel A representing the effects for female microentrepreneurs and Panel B the effect for male microentrepreneurs. We find that 12 months following the interventions, female entrepreneurs in the combined treatment experienced an increase in profits that is significant at the 10% level relative to the control mean.²⁴ One challenge with our data is that in 2015 we measure profits by asking respondents about their total revenue and total expenses. However, the mean of profits in the control group is negative. This can result, for instance, from inconsistencies in the timing of investments

²⁴All variables are deflated to 2015 prices.

(expenses) and revenues. We include a control for book-keeping at baseline in all our specifications to allay concerns with measurement error. Moreover, when we include a control for endline book-keeping, the impact of the interventions is very similar suggesting that our effects are unlikely to be driven by reduced measurement error due to improved book-keeping.²⁵ In 2020, we ask directly about business profit, which had substantially less measurement error. Using this measure, we find that the positive effect on profit persists and, in fact, grows with time.²⁶ Six years after our intervention, we find that profits reported by the combined treatment group have almost doubled relative to the control mean. While the overall attrition in our sample for the 2020 phone survey was high, it was balanced across experimental groups, and importantly, within each gender stratum. Table 1 includes Lee bounds for each estimate to account for attrition (Lee, 2004).²⁷

Female microentrepreneurs who received support to open a mobile money account only do not show changes to profits in the short-run but they experienced a significant increase in profits by 2020 that is comparable in magnitude to the effects of the combined treatment. As a result, the test of the combined treatment having an effect that is greater than the independent effect of each of the treatments is not statistically significant at conventional levels. We explore further heterogeneity in section 4 to identify which sub-groups of female microentrepreneurs benefited the most from each treatment.²⁸

Column 5 examines the impact of the interventions on household-level financial security. This is measured through an unweighted average of responses to whether all members of the household had enough to eat in a given day and whether the microentrepreneur had been able to pay for schooling expenses in the previous 12 months.²⁹ We find that both the combined and

²⁵See Table A9 in the Appendix.

²⁶We do not find any evidence of treatment effects varying by market size, despite significant variation across our markets, with the largest markets housing thousands of microentrepreneurs. If treatment effects were more pronounced in smaller markets, it might have indicated business stealing effects (McKenzie and Puerto 2020).

²⁷In Tables A12 and A13 in the Online Appendix we restrict the sample to the one we interviewed in 2020. The results are quantitatively and qualitatively similar suggesting that attrition is unlikely to be biasing our results.

²⁸Note also that the observed change in profits is within the range of one year treatment effects (-15% to 61.1%) that have been found in the literature for business training interventions (only) as documented in McKenzie (2020). Our estimates correspond to a 181% increase in profits from the combined intervention after 6 years.

²⁹The financial security indicator is rescaled in the table to be increasing with positive numbers. The ques-

the mobile money treatments are associated with higher levels of financial security for female-led microentrepreneurs relative to a control group of female microentrepreneurs that did not benefit from the interventions.³⁰

In Panel B we examine the effect of the interventions on male microentrepreneurs. We find that our interventions were infra-marginal to monthly profits and to the financial security of male microentrepreneurs, potentially due to the fact that they have higher levels of access to traditional banking and to financial management skills at baseline, when compared to their female counterparts.

3.2 Mechanisms

3.2.1 Financial Management Skills

We assess the effectiveness of our financial management training through a 15-question test covering the material taught during the module. This included questions about how to separate business and household accounts, how to differentiate between gross and net profits, what costs to consider when preparing a budget, and how to deal with family pressure for redistribution.³¹ At the end of the training, the groups that received the financial management train-

tion asked in the survey was how frequently anyone in the household had gone without eating in the previous 12 months and whether the microentrepreneur had been unable to cover schooling expenses. Both phrasings mitigate concerns with affirmative bias in responses.

³⁰These results are also robust to clustering the standard errors at the market level to account for market-level shocks to general business conditions.

³¹The financial literacy index consists of correct responses to the following questions: “If you spend 25 meticaï in transport to the market to buy products you intend to sell, should this be considered a a. cost, b. an expenditure, c. revenue, d. profit?”; “If you spend 15 meticaï on a transporter carrying your products how should that be recorded in your accounts a. cost, b. an expenditure, c. revenue, d. profit?” “And the money spent on school books for your children?”; “At the end of the day, if you made 500 meticaï through sales, how should you record it: a. cost, b. an expenditure, c. revenue, d. profit?”; “Gross profit corresponds to: a. disposable money that you can spend at the end of the month, after subtracting all your business expenses, b. the money you received from sales throughout the month; c. the money you spend directly on buying your products”; “When estimating your net profit, which budget categories should you consider? a. transport costs incurred in to purchase the product, b. the cost of the products, c. electricity used in your store, d. market rent that you pay every month, e. contributions for savings groups”; “When a relative wants to get a product without paying or comes to ask for money, what should you do? a. give him/her the money or the product, b. wait until you have saved some profits and help at that time; c. draw this money from your daily revenues”; “If the return rate on an investment is 8% and the interest rate for a loan is 5%, should you take out the loan?”; “Can you explain the meaning of a bank transfer?”; “Can you explain the meaning of a bank deposit?”; “Can you explain the meaning of a bank withdrawal?”

ing scored on average 60% in the test (with a 20% standard deviation). Table 2 shows that 12 months following the intervention, all female treated groups that received the training scored approximately 10% higher in the test, relative to the control and mobile money groups.³² Tables A14 and A15 in the Online Appendix show that the training was also effective for male microentrepreneurs. These results suggest that our training succeeded in improving financial management skills, and that these learnings persisted even 12 months after the intervention. To ensure that we are isolating the effect of the training alone, we measure numerical literacy through a four-question test both at baseline and at endline. This test involved calculating simple additions, subtractions and price discounts in the marketplace. Our interventions were not designed to impart more numerical skills to participants, so reassuringly, we find no effect of our treatments on numerical literacy in column (2).

The second dimension of financial management practices that we assessed was the quality of book-keeping, 12 months after microentrepreneurs had been trained and encouraged to engage in regular book-keeping to track sales on credit, total sales and inventories. Column 3 shows that only the group receiving the combined treatment reported improved practices of book-keeping 12 months after the interventions - a 31% improvement on a score that ranges from 0-3.³³ Book-keeping was a critical component of the financial management training intervention and all participants were provided with logbooks to encourage record keeping for the first 3 months following the intervention.³⁴ Taken together, these results suggest that the financial management training was successful in improving financial management skills, assessed in terms of the vendors' theoretical knowledge of how to manage the finances of the business, but that the actual management practices implemented were only sustained for the combined treatment group. The rate of decay of financial management knowledge might be fast if microentrepreneurs have no means to apply it effectively for lack of the right financial

³²Performance in this test was standardized to be between 0 and 1.

³³The book-keeping index captures the number of accounting books the business uses regularly including a sales book, sales on credit and inventory.

³⁴We measured book-keeping through direct observation based on whether the books were in the store and had entries in them.

tools.

The business management training was also effective in reducing transfers to relatives. In our baseline survey, 77% of respondents reported a belief that transfers to relatives and friends would never be repaid and 70% of respondents believed that this assistance would not be reciprocated in case of need. An important part of our financial training alerted participants to ensure that any redistribution should not occur out of business revenue, and that saving and re-investing profits could enlarge the pie for future redistribution. All groups experienced lower remittances relative to the control group, even though the differences are noisy. For those in the financial management groups this might reflect the change in attitude towards remittances but for those in the mobile money group it might be driven by the ability to keep savings in a mobile money account, where they are less accessible and visible to other members of the family and of the household.

3.2.2 Mobile Money and Savings

Panel B of Table 2 reports the impact of the interventions on exposure to, and usage, of mobile money. While over 93% of all respondents both in the control group and in the financial literacy group had heard of mobile money by the first endline in 2015, usage levels were significantly lower when compared to the treatment groups that received access to a mobile money account, as shown in Column 5.

Column 6 reveals that participants in the mobile money treatments were more likely to use their accounts but only those in the combined treatment group reported keeping their savings stored in their mobile money accounts.³⁵ Columns 7 and 8 show that these two groups also conducted transactions of similar value and have similar weekly balances. Table A17 in the Online Appendix reports the type of mobile money transactions performed by male and female microentrepreneurs. Mobile accounts are used for the most part to make remote payments (e.g., paying for electricity), for cash-ins, and to buy air time. Note that one of the potential

³⁵The drop in sample size for this variable is due to non-responses.

reasons behind the improved performance of female-led microenterprises who benefited from the mobile money account was that it allowed them to better track their finances. Consistent with this hypothesis, Table A17 shows that checking their account balance on the phone was twice as common for those in the mobile money treatment group as it was for those in the other treatment groups.

4 Closing the Profit Gender Gap?

We now examine whether the interventions allowed female microentrepreneurs to close the gap in knowledge and performance relative to their male counterparts in the control group.

Figure 1 shows a clear closing of the gap between female-led microenterprises in the combined treatment and male-led microenterprises in the control group for profits in 2015, profits in 2020, financial literacy, and book-keeping.³⁶

This shows that targeting female microentrepreneurs with the combined treatment can level the playing field relative to male microentrepreneurs in the control group. Targeting both female and male microentrepreneurs will widen the financial literacy gap but not necessarily the gender profit gap.

To confirm which female microentrepreneurs benefit the most from the interventions, we examine heterogeneous effects based on baseline levels of profit, conditional on all other baseline covariates. Figure 2 shows that the observed treatment effect for the combined treatment in 2020 is driven by female microentrepreneurs who started with higher levels of profits at baseline. These are the microentrepreneurs who are most likely to have the highest potential to grow their businesses in both the short and medium-run. Higher profits in the mobile money treatment group were also driven by those with higher levels of baseline profits (see both Figures 1 and 2).

To further analyse the closing of the gender gap, Table 3 pools both female and male mi-

³⁶Figure A5 shows the closing of the gap relative to the male treatment group as well.

croentrepreneurs in the analysis. The results are consistent with our previous findings: the positive impact of the combined treatment on short-run profits is positive but noisy given the increased heterogeneity in the sample, but the long-run effects of both the combined and the mobile money treatments are positive and significant. The coefficients on the male interactions are all negative (albeit only significant for the mobile money treatment), which also suggests a closing of the gender gap.³⁷

Finally, we conduct a cost-benefit analysis to assess the cost-effectiveness of the combined treatment in closing the profit gap between female and male-microentrepreneurs. The unit cost of providing the financial management training was 33 USD (2005 Meticaïs), which included the salaries of the trainers, the production and printout of materials and the book-keeping bonus. The mobile money intervention was considerably cheaper, at 6.3 USD (382.72 Meticaïs), including the cost of sim cards, the practice purchase bonus during the training and the savings bonus during the first three months. The total unit cost of the combined treatment was therefore approximately 39 USD (2388 Meticaïs). The benefit from the combined treatment was approximately 6062 Meticaïs at the end of 12 months suggesting that the cost of this intervention was easily repaid within the first 6 months following the intervention.

³⁷ Given significant differences in business attributes at baseline between the two groups, we estimate a propensity score for all participants determining the propensity of being “male-led” based on an extensive set of covariates. These include business type (store/stall), business age, previous experience as a business owner, book-keeping usage, baseline inventory, number of productive assets, and an index of financial literacy. Covariates are selected for propensity score matching if they satisfy 2 conditions. 1) The covariate is descriptively imbalanced across male and female entrepreneurs at baseline, and 2) the covariate is balanced between male and female entrepreneurs within each block (20%) of the propensity score range. The final matched sample of male and female entrepreneurs consists of individuals whose propensity scores fall between the 33rd and 66th percentile of the propensity score range, though our results are not sensitive to the choice of this threshold. (See Figure A3 in the Appendix for a distribution of the propensity scores. Results are identical when we use nearest neighbor matching. Table A11 shows that when we restrict the analysis to a comparable-on-observables sample of female and male microentrepreneurs, the impact of the combined treatment on profits (Panel A) is still significant and of similar magnitude to the coefficients observed in Table 1. This confirms our previous finding that the combined treatment has stronger effects for female-led microenterprises with higher levels of baseline profit, and therefore who are most similar on observables to their male counterparts. Panel B confirms the key mechanisms identified previously in Table 2. In this more comparable set of microentrepreneurs we no longer find a positive effect of access to mobile money on any differential long-run profits. Finally, Table A16 shows the descriptive statistics for the matched vs unmatched samples. Matching allows us to compare female and male microentrepreneurs who are more likely to both own a store instead of a stall, who are more likely to have started their business with a higher level of investment, who have lower levels of inventory, businesses that are younger, and with higher levels of expenditure, sales and productive assets.

5 Conclusions

A key policy question is whether access to savings technology and higher levels of business *know how* can help reduce the gender profit gap for microentrepreneurs operating in low income settings. We hypothesize that these two interventions might have different effects across male and female-led microenterprises and that the complementarity between the two interventions might be central to their effectiveness: access to financial capital may not be a sufficient condition for microenterprise performance if microentrepreneurs lack the ability to manage resources well. Similarly, improved financial literacy and management capabilities may not translate into improved business performance if microentrepreneurs have limited financial resources to invest towards business growth (Schaner, 2018).

This paper provides novel evidence on how mobile money and mobile money combined with business training can have a positive, significant, sizable and long-lasting effect on profits and on the financial security of female micro-entrepreneurs. The main mechanisms behind these effects are improved book-keeping, reduced transfers to relatives and increased savings. But our study uncovers significant heterogeneity in treatment effects: female microentrepreneurs with the highest level of profits at baseline are the most likely to benefit from the combined support, and close the well-documented gender gap in performance and skills relative to their male counterparts operating in the same markets. But for these types of female microentrepreneurs, even just providing access to mobile money accounts that encourage savings can have a positive impact on long-term profits. None of the treatments affect male-led microenterprise profits or financial security, potentially because the savings and the business training constraints may not bind for this population.

This significant heterogeneity in treatment effects across gender, and even within each gender across baseline levels of profits, suggests that interventions to promote microenterprise development should be targeted to the specific binding constraints faced by different subsets of microentrepreneurs in order to maximize returns.

6 References

Aker, Jenny C. (2010). "Information from Markets Near and Far: Mobile Phones and Agricultural Markets in Niger." *American Economic Journal: Applied Economics*, 2(3), 46-59.

Aker, Jenny C. and Isaac M. Mbiti. (2010). "Mobile Phones and Economic Development in Africa." *The Journal of Economic Perspectives*, 24(3), 207-232.

Aker, Jenny C, Paul Collier, and Pedro C. Vicente (2017). "Is Information Power? Using Mobile Phones and Free Newspapers during an Election in Mozambique." *The Review of Economics and Statistics*, 99(2), 185-200.

Arraiz, Irani, Syon Bhanot and Carla Calero. (2019). "Less is More: Experimental Evidence on Heuristic-Based Business Training in Ecuador", IDB Invest Working Paper TN No.18.

Banerjee, Abhijit and Esther Duflo. (2011). *Poor Economics: a radical rethinking of the way to fight global poverty*. Public Affairs, New York.

Batista, Catia and Pedro C. Vicente. (2020). "Improving access to savings through mobile money: Experimental evidence from African smallholder farmers." *World Development*, 129, 104905.

Batista, Catia and Pedro C. Vicente. (2018). "Is Mobile Money Changing Rural Africa? Evidence from a Field Experiment." NOVAFRICA Working Paper 1805.

Batista, Catia and Pedro C. Vicente. (2020). "Adopting Mobile Money: Evidence from an Experiment in Rural Africa" AEA Papers and Proceedings, 110, pp: 594-598

Bernhardt, Arielle, Erica Field, Natalia Rigol and Rohini Pande. (2019). "Household Matters: Revisiting the Returns to Capital among Female microentrepreneurs", *American Economic Review: Insights*, vol. 1 no. 2.

Bloom, Nicholas, Mahajan, Aprajit, McKenzie, David, and Roberts, John. (2010). "Why Do Firms in Developing Countries Have Low Productivity?" *The American Economic Review*, 100(2), 619-623.

Brooks, Wyatt, Kevin Donovan, and Terrence Johnson. (2018). "Mentors or teachers? Microenterprise training in Kenya", *American Economic Journal: Applied Economics* 10(4): 196-221

Bruhn, Miriam and Inessa Love. (2009). "The Economic Impact of Banking the Unbanked: Evidence from Mexico." Policy Research working paper; no. WPS 4981. World Bank.

Bruhn, Miriam, Dean Karlan and Antoinette Schoar. (2018). "The Impact of Consulting Services on Small and Medium Enterprises: Evidence from a Randomized Trial in Mexico", *Journal*

of *Political Economy*, vol. 126, issue 2, pp: 635-687

Cole, Shawn, Thomas Sampson, and Bilal Zia. (2011). "Prices or Knowledge? What Drives Demand for Financial Services in Emerging Markets?" *The Journal of Finance (New York)*, 66(6), 1933-1967.

Collins, Daryl, Jonathan Morduch, Stuart Rutherford, and Orlanda Ruthven. (2009). *Portfolios of the Poor*. Princeton: Princeton University Press.

de Mel, Suresh David McKenzie and Christopher Woodruff. (2008). "Returns to Capital in Microenterprises: Evidence from a Field Experiment." *The Quarterly Journal of Economics*, 123(4), pp: 1329-1372.

Delecourt, Solene and Odysia Ng.(2020) "Does Gender Matter for Small Business Performance? Experimental Evidence from India", manuscript

Drexler, Alejandro, Greg Fischer and Antoinette Schoar. (2014). "Keeping it simple: Financial Literacy and Rules of Thumb". *American Economic Journal. Applied Economics*, 6(2), 1-31.

Dupas, Pascaline and Jonathan Robinson. (2013). "Savings Constraints and Microenterprise Development: Evidence from a Field Experiment in Kenya." *American Economic Journal. Applied Economics*, 5(1), 163-192.

Dupas, Pascaline, Dean Karlan, Jonathan Robinson, and Diego Ubfal. (2018). "Banking the Unbanked? Evidence from Three Countries." *American Economic Journal. Applied Economics*, 10(2), 257-297.

Dupas, Pascaline, Anthony Keats and Jonathan Robinson. (2019). "The Effect of Savings Accounts on Interpersonal Financial Relationships: Evidence from a Field Experiment in Rural Kenya." *The Economic Journal (London)*, 129(617), 273-310.

Delecourt, Solène, and Odysia Ng. (2020) "Does Gender Matter for Small Business Performance? Experimental Evidence from India". Working Paper.

Field, Erica, Seema Jayachandran, Rohini Pande and Natalia Rigol. (2016). "Friendship at work: Can peer effects catalyze female entrepreneurship?", *American Economic Journal: Economic Policy* 8(2): 125-53.

Fox, Louise and Alun Thomas. (2016). "Africa has got work to do: A diagnostic of youth employment challenges in Sub-Saharan Africa", *Journal of African Economies* 25: AERC supplement 1: i16- i36,

Hardy, Morgan and Gisella Kagy. (2018). "Mind The (Profit) Gap: Why Are Female Enterprise Owners Earning Less Than Men?", *American Economic Association, Papers and Proceedings*, vol. 108, pp:252-55

Hardy, Morgan, and Gisella Kagy. (2020) "It's Getting Crowded in Here: Experimental Evidence of Demand Constraints in the Gender Profit Gap." *The Economic Journal*, 130.631, pp: 2272-2290.

Horn, Samantha, Julian Jamison, Dean Karlan, and Jonathan Zinman. (2020) "Does lasting behavior change require knowledge change? Evidence from savings interventions for young adults." No. w28011. *National Bureau of Economic Research*.

Jack, William and Tavneet Suri. (2014). "Risk Sharing and Transaction Costs: Evidence from Kenya's Mobile Money Revolution." *The American Economic Review*, 104(1), 183-223.

Jayachandran, Seema. (2018). "Microentrepreneurship in Developing Countries", CEPR Discussion Paper DP14368.

Jensen, Robert. (2007). "The Digital Divide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector." *The Quarterly Journal of Economics*, 122(3), 879-924.

Karlan, Dean, and Martin Valdivia (2011). "Teaching entrepreneurship" *The Review of Economics and Statistics*, 93(2), 510-527.

Karlan, Dean, Ryan Knight and Christopher Udry. (2015). "Consulting and capital experiments with microenterprise tailors in Ghana", *Journal of Economic Behavior and Organization*, vol. 118, issue C, pp:281-302

Klinger, Bailey, and Matthias Schundel. (2011). "Can Entrepreneurial Activity be Taught? Quasi-Experimental Evidence from Central America." *World Development*, 39(9), 1592-1610.

Mbiti, Isaac and David N. Weil. (2016). "Mobile Banking: The Impact of M-Pesa in Kenya", in *African Successes*, Volume III: Modernization and Development, Edwards, Johnson, and Weil.

McKenzie, David and Anna L. Paffhausen. (2019). "Small Firm Death in Developing Countries", *Review of Economics and Statistics*, 101(4): 645-57, 2019

McKenzie, David and Christopher Woodruff. (2017). "Business Practices in Small Firms in Developing Countries", *Management Science*, 63(9): 2967-81, 2017

McKenzie, David and Susana Puerto. (2020). "Growing Markets through Business Training for Female Entrepreneurs: A Market-Level Randomized Experiment in Kenya." *American Economic Journal. Applied Economics*, forthcoming.

McKenzie, David. (2020). "Small Business Training to Improve Management Practices in Developing Countries : Reassessing the Evidence for "Training Doesn't Work." *Policy Research Working Paper*; No. 9408. World Bank

Nix, E, E Gamberoni, and R Heath. (2015). "Bridging the Gender Gap: Identifying What Is Holding Self-Employed Women Back in Ghana, Rwanda, Tanzania, and the Republic of Congo", *World Bank Economic Review* 30(3): 501-512

Riley, Emma. (2020). "Resisting Social Pressure in the Household Using Mobile Money: Experimental Evidence on Microenterprise Investment in Uganda." Working paper.

Rosenthal, Stuart S. and William C. Strange. (2012). "Female Entrepreneurship, agglomeration and a new spatial mismatch" *The Review of Economics and Statistics*, 94(3), 764-788.

Schaner, Simone. (2018) "The persistent power of behavioral change: Long-run impacts of temporary savings subsidies for the poor." *American Economic Journal: Applied Economics*, 10, no. 3: 67.

Suri, Tavneet, and William Jack . (2016). "The Long Run Poverty and Gender Impacts of Mobile Money", *Science*, 354(6317), pp. 1288-1292

7 Tables and Figures

Table 1: Treatment Effects on Profits

OUTCOMES	Panel A: Female Entrepreneurs					Panel B: Male Entrepreneurs				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Monthly Profit 2015 ^a	Monthly Profit 2015 ^a	Monthly Profit 2020 ^{at}	Monthly Profit 2020 ^{at}	Financial Security Index	Monthly Profit 2015 ^a	Monthly Profit 2015 ^a	Monthly Profit 2020 ^{at}	Monthly Profit 2020 ^{at}	Financial Security Index
Treatment Condition										
FL	3706.138 [3201.270]	3109.018 [3360.002]	512.618 [760.847]	947.011 [916.513]	0.071 [0.085]	2415.447 [4058.046]	2589.286 [4137.502]	166.963 [943.374]	-456.235 [967.385]	0.019 [0.076]
FL + MM	5365.581 [3362.758]	6062.388* [3426.619]	1852.226** [764.010]	2164.128** [840.929]	0.176** [0.085]	1017.424 [3908.445]	502.286 [4143.916]	619.694 [1057.971]	-13.203 [1079.800]	0.073 [0.073]
MM	-548.215 [3683.109]	-1393.013 [3758.180]	1963.020*** [730.558]	1862.264** [793.373]	0.151* [0.082]	1405.220 [3949.790]	1499.937 [4003.604]	-880.326 [912.818]	-1497.000 [983.155]	0.093 [0.071]
Lee Bounds FL	[-8422, 14779]	[-8422, 14779]	[-2253, 1405]	[-2253, 1405]	[-0.14, 0.43]	[-8768, 21834]	[-8768, 21834]	[-1653, 2899]	[-1653, 2899]	[-0.19, 0.32]
Lee Bounds FL + MM	[-8470, 15254]	[-8470, 15254]	[-1416, 3282]	[-1416, 3282]	[-0.04, 0.52]	[-8902, 15155]	[-8902, 15155]	[-1203, 4551]	[-1203, 4551]	[-0.07, 0.34]
Lee Bounds MM	[-11636, 9981]	[-11636, 9981]	[-1005, 2645]	[-1005, 2645]	[-0.02, 0.44]	[-9237, 16252]	[-9237, 16252]	[-2668, 2176]	[-2668, 2176]	[-0.10, 0.35]
Control Group Mean	-15334.838	-15442.492	1219.375	1194.291	2.568	-17211.856	-18136.840	2449.267	2560.338	2.728
Control Group St.d	28969.671	29320.627	1669.294	1689.674	0.816	32669.961	33564.107	3669.321	3726.349	0.622
p-value FL = Comb	0.575	0.330	0.094	0.146	0.183	0.691	0.575	0.663	0.671	0.452
p-value MM = Comb	0.085	0.035	0.893	0.740	0.731	0.911	0.783	0.154	0.136	0.760
p-value MM = FL	0.208	0.190	0.102	0.380	0.291	0.784	0.771	0.227	0.183	0.295
p-value MM = FL = Comb	0.221	0.107	0.166	0.345	0.381	0.921	0.854	0.289	0.221	0.568
p-value MM + FL = Comb	0.635	0.370	0.545	0.557	0.691	0.593	0.505	0.351	0.192	0.696
p-value MM + FL >= Comb	0.317	0.185	0.727	0.722	0.655	0.703	0.748	0.175	0.096	0.652
Controls	NO	YES	NO	YES	YES	NO	YES	NO	YES	YES
Market Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Sector Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	582	555	142	139	637	487	451	137	126	509
Adjusted R-squared	0.038	0.051	0.009	-0.060	0.061	0.048	0.058	0.002	0.089	0.093
F-Statistic	0.877	1.712	1.845	1.120	2.785	0.503	1.170	2.360	1.845	1.799

Notes: Robust standard errors in parentheses, clustered at the level of the entrepreneur. All models control for the dependent variable's baseline value (where possible), market fixed effects and sector fixed effects. The full set of controls include the age of the business, the type of business (store or stall), the number of employees at baseline, an index of financial numeracy, an index of book keeping at baseline, inventory size at baseline, the entrepreneurs' previous experience as a business owner, log number of productive assets at baseline, and whether or not the entrepreneur has given/received a loan from a family member in the year prior to intervention. The financial security index is based on a question about how frequently anyone in the household had gone without eating in the previous 12 months and whether the microentrepreneur had been unable to cover schooling expenses (rescaled for positive numbers). Models 1, 2, 5, 6, 7, and 10 correspond to an end line survey taken in July, 2015. Models 3, 4, 8 and 9 correspond to a follow-up survey undertaken in November, 2020. ^a indicates that the outcome variable was winsorized and ^t indicates that the outcome variable was deflated to correspond to prices in 2015 *** p<0.01, ** p<0.05, * p<0.1

Table 2: Mechanisms, Female Entrepreneurs

OUTCOMES	Panel A: Business Practices				Panel B: Mobile Money Usage			
	(1) Financial Literacy Index	(2) Numerical Literacy Index	(3) Book- Keeping Index	(4) Remit. To Family ^l	(5) Reports Using MM	(6) Reported MM Savings ^m	(7) Weekly MM Balance ^m	(8) Weekly Transaction Value ^m
Treatment Condition								
FL	0.057*** [0.021]	0.007 [0.023]	0.182 [0.125]	-145.389 [96.754]	-0.062* [0.036]	0.276 [0.978]	0.079 [0.088]	0.007 [0.017]
FL + MM	0.060*** [0.019]	0.018 [0.023]	0.268** [0.129]	-139.816 [87.295]	0.194*** [0.047]	2.175*** [0.768]	1.797*** [0.150]	0.061*** [0.022]
MM	0.023 [0.019]	-0.007 [0.024]	0.024 [0.118]	-193.558 [133.732]	0.145*** [0.046]	0.860 [0.775]	1.908*** [0.153]	0.061*** [0.018]
Lee Bounds FL	[0.01, 0.10]	[-0.05, 0.11]	[-0.29, 0.57]	[-399, 2]	[-0.17, 0.01]	[-3.47, 1.72]	[0.06, 0.15]	[0.01, 0.03]
Lee Bounds FL + MM	[0.01, 0.12]	[-0.07, 0.14]	[-0.34, 0.79]	[-424, 26]	[-0.05, 0.42]	[-3.12, 5.71]	[1.62, 1.94]	[-0.02, 0.08]
Lee Bounds MM	[-0.02, 0.06]	[-0.08, 0.10]	[-0.49, 0.39]	[-423, 747]	[-0.02, 0.29]	[-2.79, 4.57]	[1.93, 2.00]	[0.02, 0.07]
Control Group Mean	0.596	0.803	0.862	262.870	0.121	2.209	0.121	0.017
Control Group St.d	0.175	0.212	1.012	1054.909	0.328	2.755	0.663	0.345
p-value FL = Comb	0.878	0.630	0.507	0.918	0.000	0.015	0.000	0.045
p-value MM = Comb	0.042	0.295	0.051	0.564	0.335	0.022	0.574	0.989
p-value MM = FL	0.082	0.539	0.194	0.600	0.000	0.467	0.000	0.014
p-value MM = FL = Comb	0.085	0.577	0.133	0.844	0.000	0.015	0.000	0.028
p-value MM + FL = Comb	0.462	0.589	0.722	0.188	0.075	0.353	0.377	0.809
p-value MM + FL >= Comb	0.769	0.294	0.361	0.094	0.038	0.176	0.811	0.595
Controls	YES	YES	YES	YES	YES	YES	YES	YES
Market Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
Sector Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
Week Fixed Effects	NO	NO	NO	NO	NO	NO	YES	YES
Observations	637	642	631	219	604	126	125,450	125,450
Adjusted R-squared	0.112	0.068	0.029	0.063	0.099	0.139	0.301	0.039
F-Statistic	3.065	0.493	1.486	0.552	4.489	4.423	10.855	2.364

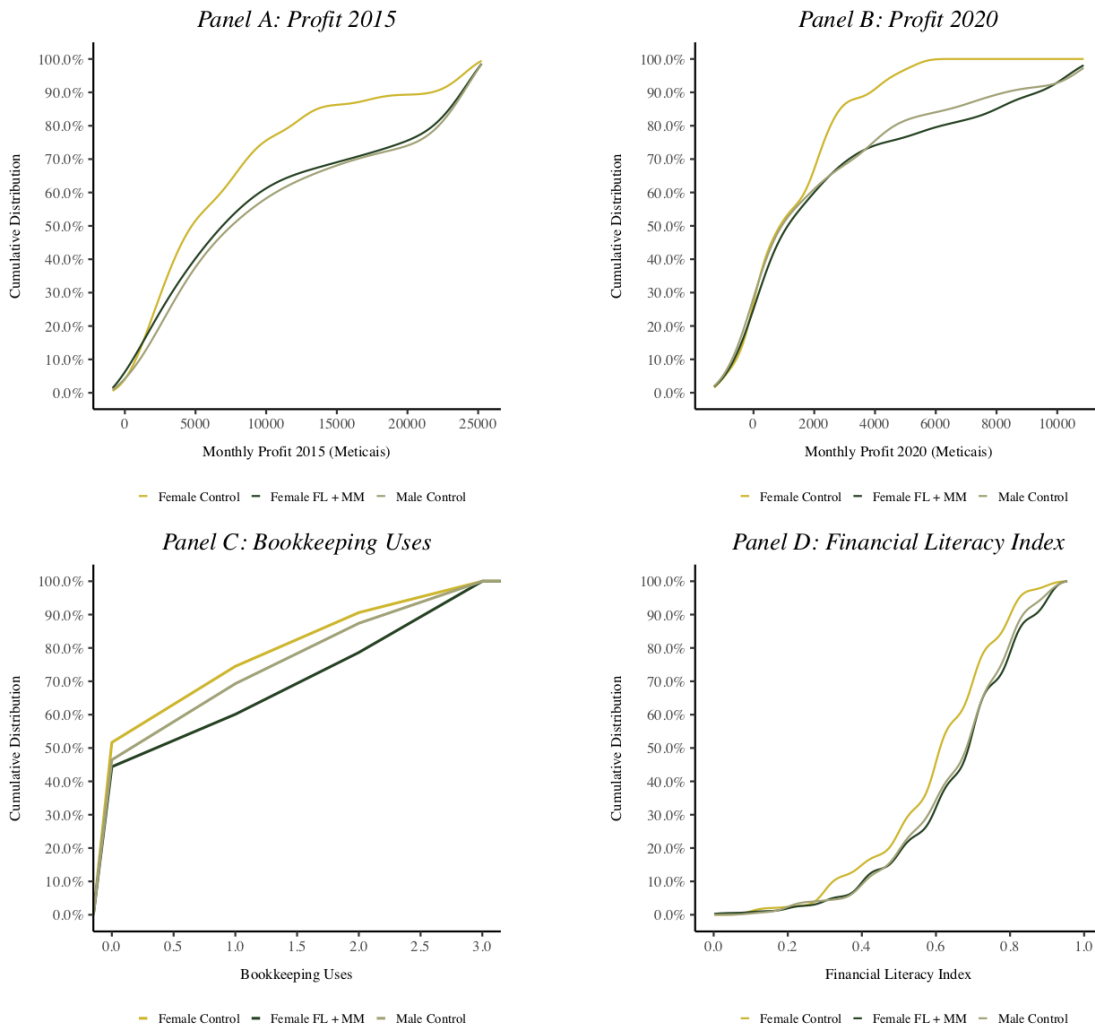
Notes: Robust standard errors in parentheses, clustered at the level of the entrepreneur. All models control for the dependent variable's baseline value (where possible), market fixed effects, sector fixed effects, the age of the business, the type of business (store or stall), the number of employees at baseline, an index of financial numeracy, an index of book keeping at baseline, inventory size at baseline, the entrepreneurs' previous experience as a business owner, and whether or not the entrepreneur has given/received a loan from a family member in the year prior to intervention. Columns 7 and 8 additionally include week fixed effects. The dependent variable in models 1, 2, 3, 5, and 6 correspond to its value in the end line survey (July, 2015), while model 4 corresponds to its value in the follow-up survey (November, 2020). Models 7 and 8 correspond to an administrative data set from the Mobile Money operator that tracks mobile money usage and account balances from June 2014 to February 2018, for a total of 193 weeks. The final sample size corresponds to the number of entrepreneurs (eg 658) times the number of weeks (193). ^a indicates that the outcome variable was winsorized, ^l indicates that the outcome variable was deflated to correspond to prices in 2015, and ^m indicates that that the dependent variable was log transformed. *** p<0.01, ** p<0.05, * p<0.1

Table 3: Pooled Sample: Male and Female Entrepreneurs

OUTCOMES	Panel A: Profit					Panel B: Mechanisms					
	(1) Monthly Profit 2015 ^a	(2) Monthly Profit 2015 ^a	(3) Monthly Profit 2020 ^{at}	(4) Monthly Profit 2020 ^{at}	(5) Financial Security Index 2015	(6) Financial Literacy Index	(7) Book-Keeping Index	(8) Remit. To Family ^t	(9) Reports Using MM	(10) Weekly MM Balance ^m	(11) Weekly Transaction Value ^m
Treatment Condition											
FL	3271.467 [3223.752]	2675.963 [3320.643]	574.762 [663.627]	584.367 [718.269]	0.065 [0.087]	0.058*** [0.020]	0.202 [0.124]	-172.004 [151.130]	-0.054 [0.035]	0.073 [0.087]	0.012 [0.018]
FL + MM	4562.489 [3334.933]	4096.723 [3371.132]	1910.642*** [726.038]	1970.978** [779.011]	0.168** [0.084]	0.063*** [0.019]	0.288** [0.126]	-155.925 [153.233]	0.204*** [0.046]	1.795*** [0.150]	0.061** [0.024]
MM	-1358.758 [3630.815]	-2022.547 [3689.745]	1913.909*** [716.537]	1432.494* [735.477]	0.162** [0.082]	0.026 [0.019]	0.021 [0.117]	-260.026 [166.917]	0.150*** [0.045]	1.942*** [0.151]	0.063*** [0.018]
FL * Male	-827.162 [5143.719]	-306.935 [5296.013]	-56.500 [1112.602]	-286.751 [1177.650]	-0.056 [0.115]	0.022 [0.029]	0.139 [0.194]	600.743 [613.012]	0.049 [0.057]	-0.072 [0.146]	0.013 [0.025]
(FL + MM) * Male	-3302.382 [5130.663]	-4049.809 [5333.473]	-1036.270 [1285.708]	-968.147 [1391.937]	-0.109 [0.111]	0.010 [0.029]	0.103 [0.198]	-407.349 [364.020]	0.119* [0.072]	0.118 [0.241]	0.047 [0.039]
MM * Male	2440.908 [5378.451]	2541.459 [5476.988]	-2464.100** [1137.271]	-2351.684** [1178.180]	-0.083 [0.108]	-0.046 [0.029]	-0.117 [0.180]	-147.403 [350.963]	0.109 [0.071]	0.135 [0.233]	0.083** [0.039]
Male	-489.069 [4134.634]	88.023 [4313.168]	1572.158** [756.479]	1701.501** [830.194]	0.104 [0.087]	0.046** [0.022]	0.097 [0.139]	372.707 [300.626]	-0.008 [0.046]	0.057 [0.110]	-0.000 [0.017]
Lee Bounds FL	[-6559, 14742]	[-7417, 16870]	[-1347, 1469]	[-1404, 1551]	[-0.12, 0.37]	[0.03, 0.11]	[-0.25, 0.70]	[-2557, 644]	[-0.15, 0.03]	[-0.15, 0.05]	[-0.01, 0.02]
Lee Bounds FL + MM	[-5544, 12946]	[-6833, 14790]	[-369, 2361]	[-420, 2663]	[-0.01, 0.42]	[0.04, 0.10]	[-0.19, 0.71]	[-484, 473]	[0.05, 0.41]	[1.69, 1.94]	[-0.01, 0.09]
Lee Bounds MM	[-7056, 7927]	[-8191, 11643]	[-1262, 2068]	[-1543, 1970]	[-0.02, 0.37]	[-0.02, 0.05]	[-0.53, 0.28]	[-535, 180]	[0.05, 0.33]	[1.92, 2.08]	[-0.01, 0.12]
Control Group Mean	-16199.357	-16514.878	1869.461	1907.898	2.635	.62	.907	475.293	.127	.169	.012
Control Group St.d	30678.375	31175.957	2949.466	2994.470	0.743	0.178	1.057	1526.400	0.334	0.814	0.283
p-value FL = Comb	0.662	0.634	0.089	0.094	0.182	0.788	0.503	0.880	0.000	0.000	0.068
p-value MM = Comb	0.081	0.073	0.997	0.544	0.929	0.043	0.030	0.406	0.286	0.457	0.937
p-value MM = FL	0.166	0.159	0.104	0.331	0.197	0.103	0.135	0.474	0.000	0.000	0.017
p-value MM = FL = Comb	0.201	0.186	0.147	0.239	0.331	0.095	0.080	0.686	0.000	0.000	0.039
p-value MM + FL = Comb	0.568	0.470	0.578	0.966	0.602	0.432	0.707	0.164	0.078	0.306	0.660
p-value MM + FL >= Comb	0.284	0.235	0.711	0.517	0.699	0.784	0.353	0.082	0.039	0.847	0.670
Controls	NO	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
Market Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Sector Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Week Fixed Effects	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
Observations	1,069	1,017	279	266	1,158	1,158	1,132	405	1,114	227,354	227,354
Adjusted R-squared	0.043	0.054	-0.004	0.019	0.068	0.104	0.053	0.027	0.116	0.299	0.043
F-Statistic	0.966	1.439	2.163	1.674	2.436	6.819	2.569	0.757	8.071	16.747	3.188

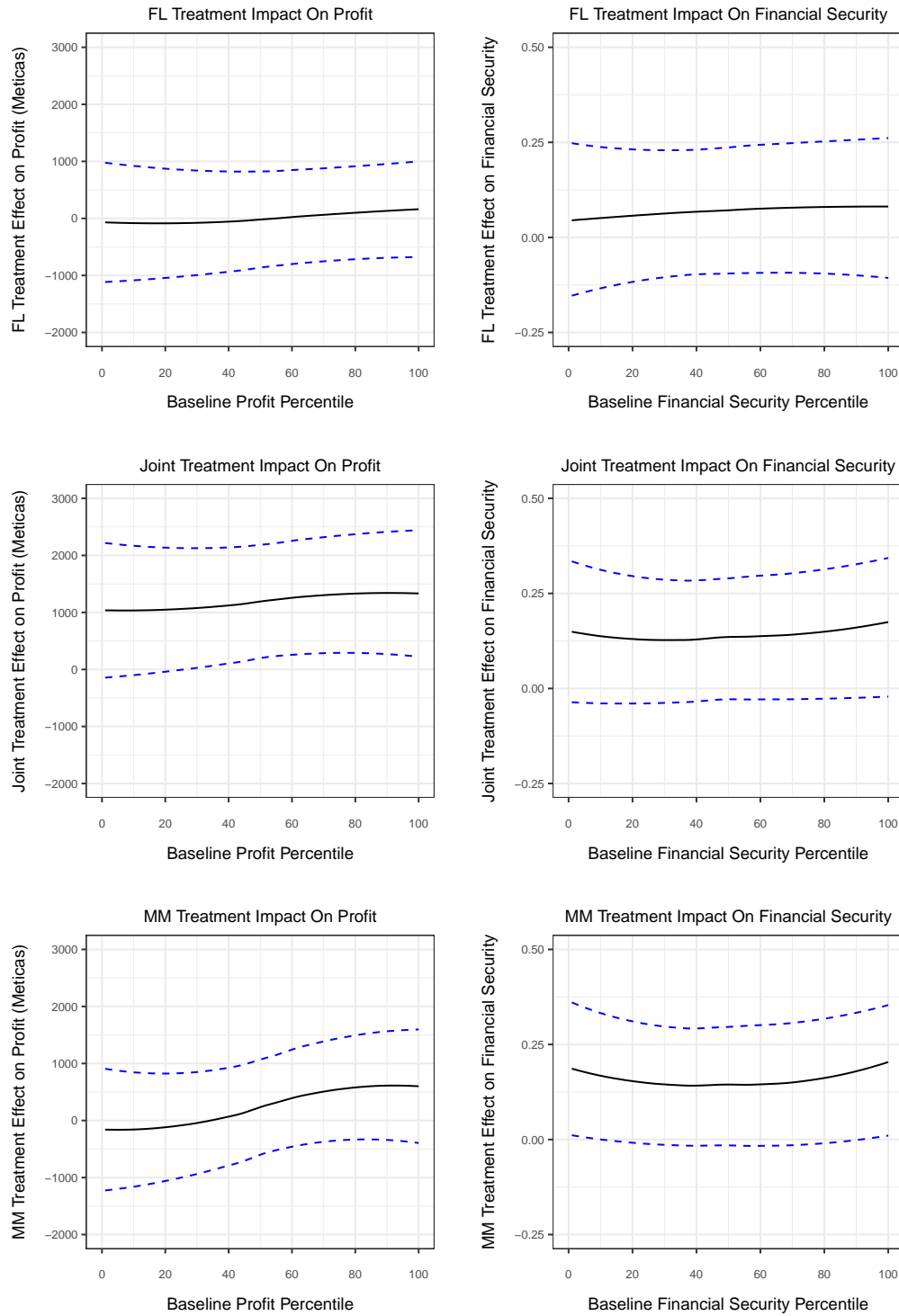
Notes: Robust standard errors in parentheses, clustered at the level of the entrepreneur. All models control for the dependent variable's baseline value (where possible), market fixed effects, and sector fixed effects. The full set of controls include the age of the business, the type of business (store or stall), the number of employees at baseline, an index of financial numeracy, inventory size at baseline, the entrepreneurs' previous experience as a business owner, and whether or not the entrepreneur has given/received a loan from a family member in the year prior to the intervention. Columns 10 and 11 additionally include week fixed effects. The dependent variable in models 1, 2, 5, 6, 7 and 9 correspond to its value in the end line survey (July, 2015), while models 3, 4 and 8 corresponds to it's value in the follow-up survey (November, 2020). Models 10 and 11 correspond to an administrative data set from the Mobile Money operator that tracks mobile money usage and account balances from June 2014 to February 2018. ^a indicates that the outcome variable was winsorized, ^t indicates that the outcome variable was deflated to correspond to prices in 2015, and ^m indicates that that the dependent variable was log transformed. *** p<0.01, ** p<0.05, * p<0.1

Figure 1: Closing the Gap on Profit, Financial Management And Book-keeping



Notes: Panel (A) reports the closing of the gap in profit between 2014 and 2015 for female-led microenterprises in the combined treatment group and male-led microenterprises in the control group. Panel (B) shows the closing of the gender gap on profit between 2014 and 2020. Panel (C) shows the closing of the gap in book-keeping practices, and panel (D) the closing of the gap in financial management knowledge, as measured by a 15-question test on core financial literacy and management concepts.

Figure 2: Heterogeneity of Treatment Effects in 2020 by Baseline Levels of Profits for Female Entrepreneurs in all Treatments.



Notes: Figure 2 plots treatment effects on profit (left column) and financial security (right column) for female entrepreneurs, conditional on the baseline values of each variable, controlling for baseline covariates. Graphs show 90% confidence intervals.

ONLINE APPENDIX FOR
CLOSING THE PROFIT GENDER GAP?
(NOT FOR PUBLICATION)

March 2022

Table A1: Balance By Experimental Groups, 2015 Endline Sample

	Panel A: Female Entrepreneurs					Panel B: Male Entrepreneurs					Joint Orth. Test	
	Control	FL	FL + MM	MM	Full Sample	Control	FL	FL + MM	MM	Full Sample		
Business Characteristics												
Business Type	0.364 (0.039)	0.397 (0.037)	0.391 (0.036)	0.378 (0.036)	0.383 (0.018)	0.929	0.438 (0.044)	0.446 (0.041)	0.418 (0.042)	0.428 (0.040)	0.433 (0.021)	0.968
% Owns Business	0.935 (0.020)	0.897 (0.023)	0.902 (0.022)	0.888 (0.024)	0.904 (0.011)	0.505	0.840 (0.032)	0.899 (0.025)	0.887 (0.027)	0.868 (0.028)	0.874 (0.014)	0.484
Initial Investment (win)	11936 (2426)	11552 (1880)	12565 (1923)	15103 (3151)	12797 (1189)	0.718	20579 (4145)	20922 (3735)	16830 (2781)	19397 (3477)	19388 (1767)	0.842
% Business Has Space For Inventory	0.539 (0.040)	0.586 (0.037)	0.565 (0.037)	0.533 (0.037)	0.556 (0.019)	0.739	0.662 (0.042)	0.628 (0.040)	0.574 (0.042)	0.658 (0.039)	0.630 (0.020)	0.404
Inventory Levels (win)	15.507 (2.335)	15.853 (2.136)	19.579 (2.513)	17.000 (2.325)	17.083 (1.172)	0.592	21.730 (2.485)	25.856 (3.547)	25.759 (4.122)	18.160 (2.803)	22.875 (1.667)	0.283
Establishment Age	142.739 (8.692)	135.193 (8.443)	116.896 (7.063)	147.844 (8.606)	135.341 (4.115)	0.037	118.443 (8.116)	120.156 (9.753)	96.489 (7.936)	109.150 (7.359)	111.037 (4.185)	0.176
Number Of Employees	0.516 (0.082)	0.443 (0.066)	0.429 (0.056)	0.531 (0.074)	0.478 (0.035)	0.645	0.551 (0.043)	0.507 (0.040)	0.441 (0.040)	0.411 (0.039)	0.475 (0.020)	0.600
Business Owner Characteristics												
% Was Previously A Vendor	0.461 (0.040)	0.468 (0.038)	0.554 (0.037)	0.439 (0.037)	0.482 (0.019)	0.133	0.420 (0.043)	0.385 (0.040)	0.340 (0.040)	0.379 (0.039)	0.380 (0.020)	0.609
% Owns Another Business	0.026 (0.013)	0.034 (0.014)	0.038 (0.014)	0.028 (0.012)	0.032 (0.007)	0.912	0.068 (0.022)	0.053 (0.018)	0.057 (0.020)	0.039 (0.016)	0.054 (0.009)	0.755
% Played Lottery Last 12 Months	0.078 (0.022)	0.109 (0.024)	0.087 (0.021)	0.044 (0.015)	0.079 (0.010)	0.154	0.198 (0.035)	0.216 (0.034)	0.135 (0.029)	0.183 (0.031)	0.183 (0.016)	0.323
Risk Aversion Index	0.853 (0.048)	0.726 (0.061)	0.731 (0.058)	0.794 (0.052)	0.773 (0.028)	0.350	0.779 (0.064)	0.817 (0.053)	0.922 (0.033)	0.852 (0.048)	0.845 (0.025)	0.231
Numerical Literacy Index	0.847 (0.015)	0.829 (0.016)	0.822 (0.015)	0.844 (0.015)	0.835 (0.008)	0.595	0.889 (0.015)	0.862 (0.015)	0.863 (0.015)	0.865 (0.014)	0.869 (0.007)	0.567
% Uses Book-Keeping	0.235 (0.039)	0.241 (0.038)	0.185 (0.039)	0.242 (0.037)	0.225 (0.019)	0.505	0.268 (0.039)	0.308 (0.038)	0.302 (0.039)	0.298 (0.037)	0.295 (0.019)	0.893
Business Performance												
Total Expenditure Last Month (win)	20805 (1867)	22549 (1859)	20639 (1440)	21613 (1666)	21409 (850)	0.851	29944 (2700)	33013 (2532)	28925 (2487)	27316 (2079)	29786 (1221)	0.387
Total Sales Last Month(win)	24416 (2144)	27462 (2277)	24294 (1785)	26116 (2186)	25590 (1048)	0.661	32510 (2795)	34482 (2786)	34132 (3016)	33993 (2735)	33814 (1415)	0.966
Number of Productive Assets	5.617 (0.610)	5.138 (0.520)	5.397 (0.513)	5.419 (0.513)	5.386 (0.268)	0.943	4.115 (0.466)	4.412 (0.399)	4.007 (0.472)	3.980 (0.347)	4.129 (0.209)	0.876
Number of Clients Past 3 Days	19.615 (1.409)	19.669 (1.217)	21.783 (1.706)	22.475 (1.894)	20.955 (0.801)	0.481	26.519 (2.513)	24.776 (2.033)	21.524 (1.577)	24.063 (1.991)	24.205 (1.023)	0.408
<i>N</i>	154	175	184	180	693		132	150	141	153	576	

Notes: *win* indicates that the variable was winsorized. Exchange rate for the metical was 1,000 meticais=40 USD. The overall initial investment was on average 632 USD, total expenditure 1000 USD and average total sales 1094 USD. The risk aversion index ranges from 0 to 1 and is based on responses to the following question: "Let's now think about a lottery in which we will toss a coin. If it lands on the inscription "Bank of Mozambique" you will receive 150 meticais. If it lands on the side with "meticais" you will receive 50 meticais. How much money would you be willing to pay to participate in this lottery" Respondents who were willing to pay more than 100 meticais, the expected value of the lottery, were identified as risk-taking, and would therefore have a lower level of risk aversion in our index. The numerical literacy index captures correct answers to four applied numeracy questions including "If you go to the wholesale market and a given product costs 6 Meticais, how much do you have to pay if you buy three of them"; "If you save 500 meticais in the bank and one day you withdraw 200 meticais how much will you have left in your account"; "If you borrow 1000 meticais from the bank with a 5% interest rate, how much will you pay in interest in the first year?"; and "Suppose you go to the market and the vendor offers you a 40% discount on a product that costs 100 meticais. How much will you have to pay?"

Table A2: Balance By Experimental Groups, 2020 Endline Sample

	<i>Panel A: Female Entrepreneurs</i>						<i>Panel B: Male Entrepreneurs</i>					
	Control	FL	FL + MM	MM	Full Sample	Joint Orth. Test	Control	FL	FL + MM	MM	Full Sample	Joint Orth. Test
Business Characteristics												
Business Type	0.446 (0.067)	0.468 (0.064)	0.420 (0.060)	0.438 (0.062)	0.442 (0.031)	0.959	0.473 (0.068)	0.484 (0.064)	0.429 (0.071)	0.375 (0.065)	0.441 (0.033)	0.640
% Owns Business	0.946 (0.030)	0.935 (0.031)	0.928 (0.031)	0.928 (0.039)	0.891 (0.017)	0.675	0.836 (0.050)	0.887 (0.041)	0.878 (0.047)	0.875 (0.045)	0.869 (0.023)	0.865
Initial Investment (win)	14111 (5030)	11481 (2707)	13895 (3484)	13939 (5157)	13350 (2037)	0.964	25727 (7808)	16929 (4309)	20303 (5579)	19601 (6746)	20551 (3087)	0.774
% Business Has Space For Inventory	0.554 (0.067)	0.694 (0.059)	0.580 (0.060)	0.547 (0.063)	0.594 (0.031)	0.314	0.691 (0.063)	0.661 (0.061)	0.592 (0.071)	0.684 (0.062)	0.659 (0.032)	0.711
Inventory Levels (win)	17.245 (5.119)	12.839 (1.623)	26.147 (4.600)	17.672 (4.446)	18.726 (2.079)	0.120	24.722 (4.635)	29.597 (4.848)	37.851 (9.732)	19.885 (5.524)	27.828 (3.109)	0.242
Establishment Age	147.393 (14.825)	145.767 (13.912)	127.043 (11.028)	153.672 (14.527)	142.976 (6.746)	0.509	127.291 (13.061)	147.066 (18.606)	105.021 (12.744)	124.421 (12.876)	127.273 (7.488)	0.278
Number Of Employees	0.482 (0.114)	0.355 (0.095)	0.449 (0.096)	0.500 (0.119)	0.446 (0.053)	0.776	0.611 (0.136)	0.377 (0.094)	0.681 (0.164)	0.327 (0.097)	0.488 (0.061)	0.121
Business Owner Characteristics												
% Was Previously A Vendor	0.429 (0.067)	0.468 (0.064)	0.565 (0.060)	0.422 (0.062)	0.474 (0.032)	0.327	0.473 (0.068)	0.355 (0.061)	0.306 (0.067)	0.333 (0.063)	0.368 (0.032)	0.294
% Owns Another Business	0.018 (0.018)	0.065 (0.031)	0.043 (0.025)	0.016 (0.016)	0.036 (0.012)	0.416	0.073 (0.035)	0.097 (0.038)	0.102 (0.044)	0.035 (0.025)	0.076 (0.018)	0.534
% Played Lottery Last 12 Months	0.089 (0.038)	0.129 (0.043)	0.101 (0.037)	0.047 (0.027)	0.092 (0.018)	0.450	0.291 (0.062)	0.242 (0.055)	0.122 (0.047)	0.211 (0.054)	0.220 (0.028)	0.211
Risk Aversion Index	0.833 (0.083)	0.681 (0.106)	0.674 (0.108)	0.860 (0.079)	0.758 (0.048)	0.371	0.885 (0.024)	0.853 (0.024)	0.857 (0.027)	0.867 (0.022)	0.865 (0.012)	0.798
Numerical Literacy Index	0.847 (0.015)	0.829 (0.016)	0.822 (0.015)	0.844 (0.015)	0.835 (0.008)	0.595	0.885 (0.024)	0.853 (0.024)	0.857 (0.027)	0.867 (0.022)	0.865 (0.012)	0.798
% Uses Book-Keeping	0.250 (0.058)	0.194 (0.051)	0.159 (0.044)	0.190 (0.050)	0.196 (0.025)	0.655	0.222 (0.057)	0.344 (0.061)	0.417 (0.072)	0.309 (0.063)	0.321 (0.032)	0.204
Business Performance												
Total Expenditure Last Month (win)	20357 (2789)	21661 (3345)	21851 (2221)	20237 (2589)	21063 (1363)	0.962	30536 (4190)	31081 (3594)	32904 (4483)	25027 (3336)	29796 (1935)	0.518
Total Sales Last Month(win)	24138 (4074)	25143 (3476)	23803 (2670)	27137 (3904)	24983 (1733)	0.912	33049 (4610)	32386 (4108)	32950 (5317)	30207 (4484)	32144 (2286)	0.970
Number of Productive Assets	5.232 (0.968)	5.484 (0.894)	5.203 (0.790)	5.734 (0.901)	5.414 (0.440)	0.971	4.309 (0.822)	3.806 (0.433)	4.286 (0.756)	3.912 (0.536)	4.063 (0.317)	0.921
Number of Clients Past 3 Days	19.272 (2.701)	18.098 (1.752)	20.313 (2.114)	22.065 (3.804)	19.946 (1.316)	0.751	30.819 (4.832)	24.848 (3.379)	20.740 (2.261)	24.820 (3.434)	25.405 (1.824)	0.302
<i>N</i>	56	62	69	64	251		55	62	49	57	223	

Notes: *win* indicates that the variable was winsorized. The risk aversion index ranges from 0 to 1 and is based on responses to the following question: “Let’s now think about a lottery in which we will toss a coin. If it lands on the inscription “Bank of Mozambique” you will receive 150 meticaís. If it lands on the side with “meticaís” you will receive 50 meticaís. How much money would you be willing to pay to participate in this lottery?” Respondents who were willing to pay more than 100 meticaís, the expected value of the lottery, were identified as risk-taking, and would therefore have a lower level of risk aversion in our index. The numerical literacy index captures correct answers to four applied numeracy questions including “If you go to the wholesale market and a given product costs 6 Meticaís, how much do you have to pay if you buy three of them”; “If you save 500 meticaís in the bank and one day you withdraw 200 meticaís how much will you have left in your account?”; “If you borrow 1000 meticaís from the bank with a 5% interest rate, how much will you pay in interest in the first year?”; and “Suppose you go to the market and the vendor offers you a 40% discount on a product that costs 100 meticaís. How much will you have to pay?”

Table A3: Attrition Across Experimental Groups

	Control	FL	FL + MM	MM	Overall Sample	Joint Orthogo- nality Test
<i>Panel A: 2020 Survey Completion</i>						
% Remained, Females	0.257 (0.030)	0.286 (0.031)	0.318 (0.032)	0.296 (0.031)	0.289 (0.015)	0.564
% Remained Males	0.309 (0.035)	0.346 (0.036)	0.275 (0.034)	0.320 (0.035)	0.313 (0.017)	0.541
% Remained, Pooled Sample	0.280 (0.023)	0.313 (0.023)	0.299 (0.023)	0.307 (0.023)	0.299 (0.011)	0.446
<i>Panel B: Profit 2020 Missingness</i>						
% Missing, Females	0.188 (0.027)	0.207 (0.028)	0.230 (0.029)	0.194 (0.027)	0.205 (0.014)	0.707
% Missing, Males	0.275 (0.034)	0.229 (0.031)	0.213 (0.031)	0.225 (0.031)	0.236 (0.016)	0.534
% Missing, Pooled Sample	0.227 (0.021)	0.217 (0.021)	0.223 (0.021)	0.208 (0.020)	0.218 (0.010)	0.658

Table A4: Descriptive Statistics And Sample Balance By Attrition Group, Endline 2015 Survey Sample

	Left Sample	Remained Sample	Overall Sample	Joint Orthogonality Test
Business Characteristics				
Business Type	0.457 (0.028)	0.405 (0.014)	0.416 (0.012)	0.098
% Owns Business	0.866 (0.019)	0.891 (0.009)	0.886 (0.008)	0.222
Initial Investment ^a	16737.138 (1953.151)	15806.970 (1038.714)	15985.169 (919.035)	0.691
% Business Has Space For Inventory	0.529 (0.028)	0.590 (0.014)	0.578 (0.012)	0.049
Inventory Levels ^a	13.930 (1.211)	19.675 (0.990)	18.543 (0.832)	0.006
Establishment Age	99.032 (6.391)	124.311 (2.961)	119.294 (2.702)	0.000
Number of Employees	0.590 (0.058)	0.477 (0.026)	0.499 (0.024)	0.060
Business Owner Characteristics				
Gender	0.439 (0.028)	0.454 (0.014)	0.451 (0.013)	0.638
% Was Previously A Vendor	0.468 (0.028)	0.436 (0.014)	0.442 (0.013)	0.304
% Owns Another Business	0.035 (0.010)	0.042 (0.006)	0.040 (0.005)	0.569
% Played Lottery in last 12 Months	0.080 (0.015)	0.126 (0.009)	0.117 (0.008)	0.023
Risk Aversion Index	0.837 (0.036)	0.807 (0.019)	0.813 (0.017)	0.482
Numerical Literacy Index	0.862 (0.011)	0.850 (0.005)	0.853 (0.005)	0.345
% Uses Book-Keeping	0.277 (0.025)	0.256 (0.012)	0.260 (0.011)	0.469
Business Performance				
Total Expenditure Last Month ^a	25303.156 (1502.517)	25199.682 (731.806)	25220.245 (657.808)	0.950
Total Sales Last Month ^a	27173.296 (1556.179)	27361.154 (807.180)	27324.416 (716.875)	0.917
Number Of Productive Assets	6.494 (0.424)	4.817 (0.175)	5.151 (0.165)	0.000
Number Of Client Past 3 Days	22.029 (1.306)	22.417 (0.639)	22.339 (0.573)	0.787
<i>N</i>	317	1269	1588	

Notes: ^a indicates that the variable was winsorized. The risk aversion index ranges from 0 to 1 and is based on responses to the following question: "Let's now think about a lottery in which we will toss a coin. If it lands on the inscription "Bank of Mozambique" you will receive 150 meticaís. If it lands on the side with "meticaís" you will receive 50 meticaís. How much money would you be willing to pay to participate in this lottery?" Respondents who were willing to pay more than 100 meticaís, the expected value of the lottery, were identified as risk-taking, and would therefore have a lower level of risk aversion in our index. The numerical literacy index captures correct answers to four applied numeracy questions including "If you go to the wholesale market and a given product costs 6 Meticaís, how much do you have to pay if you buy three of them?"; "If you save 500 meticaís in the bank and one day you withdraw 200 meticaís how much will you have left in your account?"; "If you borrow 1000 meticaís from the bank with a 5% interest rate, how much will you pay in interest in the first year?"; and "Suppose you go to the market and the vendor offers you a 40% discount on a product that costs 100 meticaís. How much will you have to pay?"

Table A5: Descriptive Statistics And Sample Balance By Attrition Group, Endline 2020 Survey Sample

	Left Sample	Remained Sample	Overall Sample	Joint Orthogonality Test
Business Characteristics				
Business Type	0.404 (0.015)	0.442 (0.023)	0.416 (0.012)	0.166
% Owns Business	0.880 (0.010)	0.899 (0.014)	0.886 (0.008)	0.301
Initial Investment ^a	15646.232 (1054.928)	16764.632 (1821.202)	15985.169 (919.035)	0.576
% Business Has Space For Inventory	0.558 (0.015)	0.624 (0.022)	0.578 (0.012)	0.014
Inventory Levels ^a	16.619 (0.882)	23.018 (1.842)	18.543 (0.832)	0.000
Establishment Age	112.325 (3.183)	135.610 (5.024)	119.294 (2.702)	0.000
Number of Employees	0.513 (0.030)	0.466 (0.040)	0.499 (0.024)	0.361
Business Owner Characteristics				
Gender	0.443 (0.015)	0.470 (0.023)	0.451 (0.013)	0.309
% Was Previously A Vendor	0.450 (0.015)	0.424 (0.023)	0.442 (0.013)	0.338
% Owns Another Business	0.034 (0.005)	0.055 (0.010)	0.040 (0.005)	0.055
% Played Lottery in last 12 Months	0.102 (0.009)	0.152 (0.017)	0.117 (0.008)	0.005
Risk Aversion Index	0.828 (0.019)	0.779 (0.033)	0.813 (0.017)	0.173
Numerical Literacy Index	0.853 (0.006)	0.853 (0.009)	0.853 (0.005)	0.937
% Uses Book-Keeping	0.263 (0.013)	0.254 (0.020)	0.260 (0.011)	0.719
Business Performance				
Total Expenditure Last Month ^a	25241.391 (792.870)	25170.832 (1178.180)	25220.245 (657.808)	0.961
Total Sales Last Month ^a	29641.840 (915.667)	28344.796 (1422.154)	29245.171 (770.078)	0.438
Number Of Productive Assets	5.311 (0.203)	4.778 (0.278)	5.151 (0.165)	0.138
Number Of Client Past 3 Days	22.271 (0.666)	22.493 (1.110)	22.339 (0.573)	0.859
<i>N</i>	1113	474	1587	

Notes: ^a indicates that the variable was winsorized. The risk aversion index ranges from 0 to 1 and is based on responses to the following question: "Let's now think about a lottery in which we will toss a coin. If it lands on the inscription "Bank of Mozambique" you will receive 150 meticaís. If it lands on the side with "meticaís" you will receive 50 meticaís. How much money would you be willing to pay to participate in this lottery" Respondents who were willing to pay more than 100 meticaís, the expected value of the lottery, were identified as risk-taking, and would therefore have a lower level of risk aversion in our index. The numerical literacy index captures correct answers to four applied numeracy questions including "If you go to the wholesale market and a given product costs 6 Meticaís, how much do you have to pay if you buy three of them"; "If you save 500 meticaís in the bank and one day you withdraw 200 meticaís how much will you have left in your account?"; "If you borrow 1000 meticaís from the bank with a 5% interest rate, how much will you pay in interest in the first year?"; and "Suppose you go to the market and the vendor offers you a 40% discount on a product that costs 100 meticaís. How much will you have to pay?"

Table A6: Descriptive Statistics And Sample Balance By Gender at Baseline, Endline 2015 Survey Sample

	Female	Male	Overall Sample	Joint Orthogonality Test
Business Characteristics				
Business Type	0.383 (0.018)	0.433 (0.021)	0.405 (0.014)	0.074
% Owns Business	0.904 (0.011)	0.874 (0.014)	0.891 (0.009)	0.085
Initial Investment ^a	12797.447 (1189.046)	19388.774 (1767.875)	15806.970 (1038.714)	0.002
% Business Has Space For Inventory	0.556 (0.019)	0.630 (0.020)	0.590 (0.014)	0.008
Inventory Levels ^a	17.083 (1.172)	22.875 (1.667)	19.675 (0.990)	0.004
Establishment Age	135.341 (4.115)	111.037 (4.185)	124.311 (2.961)	0.000
Number of Employees	0.478 (0.035)	0.475 (0.040)	0.477 (0.026)	0.952
Business Owner Characteristics				
Gender	0 (0.000)	1 (0.000)	0.454 (0.014)	
% Was Previously A Vendor	0.482 (0.019)	0.380 (0.020)	0.436 (0.014)	0.000
% Owns Another Business	0.032 (0.007)	0.054 (0.009)	0.042 (0.006)	0.144
% Played Lottery in last 12 Months	0.079 (0.010)	0.183 (0.016)	0.126 (0.009)	0.000
Risk Aversion Index	0.773 (0.028)	0.845 (0.025)	0.807 (0.019)	0.055
Numerical Literacy Index	0.835 (0.008)	0.869 (0.007)	0.850 (0.005)	0.002
% Uses Book-Keeping	0.225 (0.016)	0.295 (0.019)	0.256 (0.012)	0.005
Business Performance				
Total Expenditure Last Month ^a	21409.807 (850.586)	29786.028 (1221.166)	25199.682 (731.806)	0.000
Total Sales Last Month ^a	23910.977 (976.292)	31592.753 (1317.746)	27361.154 (807.180)	0.000
Number Of Productive Assets	5.386 (0.268)	4.129 (0.209)	4.817 (0.175)	0.000
Number Of Client Past 3 Days	20.955 (0.801)	24.205 (1.023)	22.417 (0.639)	0.011
<i>N</i>	693	576	1269	

Notes: ^a indicates that the variable was winsorized. The risk aversion index ranges from 0 to 1 and is based on responses to the following question: “Let’s now think about a lottery in which we will toss a coin. If it lands on the inscription “Bank of Mozambique” you will receive 150 meticaís. If it lands on the side with “meticaís” you will receive 50 meticaís. How much money would you be willing to pay to participate in this lottery?” Respondents who were willing to pay more than 100 meticaís, the expected value of the lottery, were identified as risk-taking, and would therefore have a lower level of risk aversion in our index. The numerical literacy index captures correct answers to four applied numeracy questions including “If you go to the wholesale market and a given product costs 6 Meticaís, how much do you have to pay if you buy three of them?”; “If you save 500 meticaís in the bank and one day you withdraw 200 meticaís how much will you have left in your account?”; “If you borrow 1000 meticaís from the bank with a 5% interest rate, how much will you pay in interest in the first year?”; and “Suppose you go to the market and the vendor offers you a 40% discount on a product that costs 100 meticaís. How much will you have to pay?”

Table A7: Descriptive Statistics And Sample Balance By Gender, Endline 2020 Survey Sample

	Female	Male	Overall Sample	Joint Orthogonality Test
Business Characteristics				
Business Type	0.442 (0.031)	0.441 (0.033)	0.442 (0.023)	0.986
% Owns Business	0.924 (0.017)	0.869 (0.023)	0.899 (0.014)	0.048
Initial Investment ^a	13350.824 (2037.828)	20551.213 (3087.154)	16764.632 (1821.202)	0.048
% Business Has Space For Inventory	0.594 (0.031)	0.659 (0.032)	0.624 (0.022)	0.142
Inventory Levels ^a	18.726 (2.079)	27.828 (3.109)	23.018 (1.842)	0.013
Establishment Age	142.976 (6.746)	127.273 (7.488)	135.610 (5.024)	0.119
Number of Employees	0.446 (0.053)	0.488 (0.061)	0.466 (0.040)	0.596
Business Owner Characteristics				
Gender	0.000 (0.000)	1.000 (0.000)	0.470 (0.023)	
% Was Previously A Vendor	0.474 (0.032)	0.368 (0.032)	0.424 (0.023)	0.019
% Owns Another Business	0.036 (0.012)	0.076 (0.018)	0.055 (0.010)	0.054
% Played Lottery in last 12 Months	0.092 (0.018)	0.220 (0.028)	0.152 (0.017)	0.000
Risk Aversion Index	0.758 (0.048)	0.799 (0.044)	0.779 (0.033)	0.536
Numerical Literacy Index	0.843 (0.013)	0.865 (0.012)	0.853 (0.009)	0.195
% Uses Book-Keeping	0.196 (0.025)	0.321 (0.032)	0.254 (0.020)	0.002
Business Performance				
Total Expenditure Last Month ^a	21063.051 (1363.762)	29796.712 (1935.787)	25170.832 (1178.180)	0.000
Total Sales Last Month ^a	23352.930 (1613.717)	30048.928 (2127.588)	26495.949 (1323.575)	0.011
Number Of Productive Assets	5.414 (0.440)	4.063 (0.317)	4.778 (0.278)	0.015
Number Of Client Past 3 Days	19.946 (1.316)	25.405 (1.824)	22.493 (1.110)	0.014
<i>N</i>	251	223	474	

Notes: ^a indicates that the variable was winsorized. The risk aversion index ranges from 0 to 1 and is based on responses to the following question: "Let's now think about a lottery in which we will toss a coin. If it lands on the inscription "Bank of Mozambique" you will receive 150 meticaís. If it lands on the side with "meticaís" you will receive 50 meticaís. How much money would you be willing to pay to participate in this lottery?" Respondents who were willing to pay more than 100 meticaís, the expected value of the lottery, were identified as risk-taking, and would therefore have a lower level of risk aversion in our index. The numerical literacy index captures correct answers to four applied numeracy questions including "If you go to the wholesale market and a given product costs 6 Meticaís, how much do you have to pay if you buy three of them?"; "If you save 500 meticaís in the bank and one day you withdraw 200 meticaís how much will you have left in your account?"; "If you borrow 1000 meticaís from the bank with a 5% interest rate, how much will you pay in interest in the first year?"; and "Suppose you go to the market and the vendor offers you a 40% discount on a product that costs 100 meticaís. How much will you have to pay?"

Table A8: Firm Survival in 2020 Endline Survey

	(1) Firm Survival (Female)	(2) Firm Survival (Male)
Treatment		
FL	-0.027 [0.054]	-0.064 [0.063]
FL + MM	-0.027 [0.053]	-0.104 [0.065]
MM	-0.079 [0.053]	-0.098 [0.065]
Lee Bounds FL	[-0.22, 0.11]	[-0.32, 0.13]
Lee Bounds FL + MM	[-0.22, 0.16]	[-0.29, 0.04]
Lee Bounds MM	[-0.26, 0.05]	[-0.36, 0.09]
Control Group Mean	0.314	0.423
Control Group St.d	0.466	0.496
p-value FL = Comb	0.996	0.489
p-value MM = Comb	0.282	0.929
p-value MM = FL	0.297	0.539
p-value MM = FL = Comb	0.470	0.743
p-value MM + FL = Comb	0.274	0.504
p-value MM + FL >= Comb	0.137	0.252
Controls	YES	YES
Market Fixed Effects	YES	YES
Sector Fixed Effects	YES	YES
Observations	632	497
Adjusted R-squared	0.027	0.028
F-Statistic	1.694	5.459

Notes: Robust standard errors in parentheses. All models control for market fixed effects, sector fixed effects, the age of the business, the type of business (store or stall), the number of employees at baseline, an index of financial numeracy, inventory size at baseline, the entrepreneurs' previous experience as a business owner, and whether or not the entrepreneur has given/received a loan from a family member in the year prior to intervention. A firm is 'survived' if they indicate on the follow up survey that the business is still in operation. Column (1) corresponds to female micro-entrepreneurs and column (2) corresponds to male micro-entrepreneurs.

Table A9: Treatment Effects On Profits, Controlling For Endline Bookkeeping

OUTCOMES	Panel A: Female Entrepreneurs					Panel B: Male Entrepreneurs				
	(1) Monthly Profit 2015 ^a	(2) Monthly Profit 2015 ^a	(3) Monthly Profit 2020 ^{at}	(4) Monthly Profit 2020 ^{at}	(5) Financial Security Index 2015	(6) Monthly Profit 2015 ^a	(7) Monthly Profit 2015 ^a	(8) Monthly Profit 2020 ^{at}	(9) Monthly Profit 2020 ^{at}	(10) Financial Security Index 2015
Treatment Condition										
FL	3706.138 [3201.270]	4511.597 [3272.560]	512.618 [760.847]	752.814 [886.355]	0.062 [0.086]	2415.447 [4058.046]	3920.521 [4190.475]	166.963 [943.374]	-601.873 [999.818]	-0.006 [0.074]
FL + MM	5365.581 [3362.758]	7480.638** [3335.819]	1852.226** [764.010]	1904.573** [850.804]	0.169* [0.087]	1017.424 [3908.445]	2511.670 [4205.396]	619.694 [1057.971]	157.870 [1129.923]	0.053 [0.071]
MM	-548.215 [3683.109]	-1803.656 [3739.580]	1963.020*** [730.558]	2198.559*** [805.694]	0.176** [0.082]	1405.220 [3949.790]	2070.114 [4001.924]	-880.326 [912.818]	-1278.949 [1005.174]	0.067 [0.070]
Lee Bounds FL	[-8504, 15660]	[-8233, 16496]	[-3221, 1262]	[-1559, 1027]	[-0.15, 0.45]	[-9585, 20047]	[-9617, 21639]	[-1520, 3355]	[-2448, 2239]	[-0.19, 0.32]
Lee Bounds FL + MM	[-8750, 19043]	[-8533, 19670]	[-1584, 3298]	[-1577, 4070]	[-0.03, 0.54]	[-9505, 15630]	[-8682, 17688]	[-1068, 4825]	[-1832, 4333]	[-0.10, 0.29]
Lee Bounds MM	[-11066, 9241]	[-12336, 12147]	[-655, 3037]	[-1273, 3032]	[0.02, 0.46]	[-9366, 17761]	[-9409, 19439]	[-2385, 2562]	[-2706, 2807]	[-0.12, 0.32]
Control Group Mean	-15334.838	-15240.542	1219.375	1211.001	2.554	-17211.856	-18980.823	2449.267	2576.169	2.750
Control Group St.d	28969.671	29090.404	1669.294	1745.554	0.826	32669.961	33878.655	3669.321	3781.192	0.570
p-value FL = Comb	0.575	0.306	0.094	0.144	0.183	0.691	0.703	0.663	0.501	0.412
p-value MM = Comb	0.085	0.007	0.893	0.750	0.922	0.911	0.905	0.154	0.176	0.833
p-value MM = FL	0.208	0.058	0.102	0.139	0.132	0.784	0.626	0.227	0.428	0.310
p-value MM = FL = Comb	0.221	0.025	0.166	0.229	0.263	0.921	0.877	0.289	0.371	0.570
p-value MM + FL = Comb	0.635	0.316	0.545	0.347	0.542	0.593	0.518	0.351	0.189	0.932
p-value MM + FL >= Comb	0.317	0.158	0.727	0.826	0.729	0.703	0.741	0.175	0.095	0.534
Controls	NO	YES	NO	YES	YES	NO	YES	NO	YES	YES
Market Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Sector Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	582	554	142	134	633	487	444	137	123	502
Adjusted R-squared	0.038	0.074	0.009	-0.047	0.067	0.048	0.072	0.002	0.038	0.101
F-Statistic	0.877	2.448	1.845	0.915	3.048	0.503	0.971	2.360	1.467	1.914

Notes: Robust standard errors in parentheses. All models control for the dependent variable's baseline value (where possible), market fixed effects and sector fixed effects. The full set of controls include the age of the business, the type of business (store or stall), the number of employees at baseline, an index of financial numeracy, inventory size at baseline, the entrepreneurs' previous experience as a business owner, log number of productive assets at baseline, whether or not the entrepreneur has given/received a loan from a family member in the year prior to intervention, and an index of endline bookkeeping. Models 1, 2, 5, 6, 7, and 10 correspond to an end line survey taken in July, 2015. Models 3, 4, 8 and 9 correspond to a follow-up survey taken in November, 2020. ^a indicates that the outcome variable was winsorized and ^f indicates that the outcome variable was deflated to correspond to prices in 2015 *** p<0.01, ** p<0.05, * p<0.1

Table A10: Pooled Sample: Treatment Effects on Profits

<i>All Entrepreneurs</i>					
OUTCOMES	(1) Monthly Profit 2015 ^a	(2) Monthly Profit 2015 ^a	(3) Monthly Profit 2020 ^{at}	(4) Monthly Profit 2020 ^{at}	(5) Financial Security Index
Treatment Condition					
FL	2906.545 [2547.041]	2368.563 [2646.922]	427.119 [549.885]	363.555 [550.648]	0.043 [0.058]
FL + MM	3165.931 [2518.384]	2451.986 [2614.831]	1283.337** [616.681]	1400.807** [627.415]	0.126** [0.057]
MM	-195.153 [2639.958]	-887.432 [2731.676]	580.746 [536.030]	192.894 [541.350]	0.121** [0.056]
Lee Bounds FL	[-7233, 16471]	[-7233, 16471]	[-1304, 2097]	[-1304, 2097]	[-0.12, 0.38]
Lee Bounds FL + MM	[-7036, 17094]	[-7036, 17094]	[-211, 3385]	[-211, 3385]	[-0.02, 0.41]
Lee Bounds MM	[-8539, 11769]	[-8539, 11769]	[-1187, 2480]	[-1187, 2480]	[-0.02, 0.36]
Control Group Mean	-16199.357	-16667.195	1869.461	1907.898	2.639
Control Group St.d	30678.375	31276.390	2949.466	2994.470	0.739
p-value FL = Comb	0.909	0.971	0.158	0.085	0.119
p-value MM = Comb	0.161	0.178	0.281	0.071	0.935
p-value MM = FL	0.204	0.188	0.789	0.768	0.129
p-value MM = FL = Comb	0.317	0.320	0.351	0.139	0.216
p-value MM + FL = Comb	0.896	0.788	0.736	0.303	0.616
p-value MM + FL >= Comb	0.448	0.394	0.368	0.152	0.692
Controls	NO	YES	NO	YES	YES
Market Fixed Effects	YES	YES	YES	YES	YES
Sector Fixed Effects	YES	YES	YES	YES	YES
Observations	1,069	1,006	279	265	1,146
Adjusted R-squared	0.045	0.056	-0.020	0.019	0.067
F-Statistic	1.424	1.492	1.328	1.344	2.484

Notes: Robust standard errors in parentheses. All models control for the dependent variable's baseline value (where possible), market fixed effects and sector fixed effects. The full set of controls include the age of the business, the type of business (store or stall), gender, log number of productive assets at baseline, the number of employees at baseline, an index of financial numeracy, inventory size at baseline, the entrepreneurs' previous experience as a business owner, whether or not the entrepreneur has given/received a loan from a family member in the year prior to intervention, and an index for baseline book-keeping. Models 1, 2, and 5 correspond to an end line survey taken in July, 2015. Models 3 and 4 correspond to a follow-up survey taken in November, 2020. ^a indicates that the outcome variable was winsorized and ^t indicates that the outcome variable was deflated to correspond to prices in 2015 *** p<0.01, ** p<0.05, * p<0.1

Table A11: Matched, Pooled Sample: Treatment Effect on Profits

OUTCOMES	Panel A: Profit					Panel B: Mechanisms					
	(1) Monthly Profit 2015 ^a	(2) Monthly Profit 2015 ^a	(3) Monthly Profit 2020 ^{at}	(4) Monthly Profit 2020 ^{at}	(5) Financial Security Index 2015	(6) Financial Literacy Index	(7) Book-Keeping Index	(8) Remit. To Family ^t	(9) Reports Using Mkesh	(10) Weekly Mkesh Balance ^m	(11) Weekly Transaction Value ^m
Treatment Condition											
FL	5708.637 [5373.357]	4861.619 [5608.732]	3077.655 [2030.588]	3941.144* [2218.743]	0.172 [0.133]	0.071** [0.031]	0.534** [0.209]	-236.021 [365.011]	-0.008 [0.047]	0.179 [0.140]	0.004 [0.034]
FL + MM	6814.968 [5383.150]	7442.101 [5566.715]	3331.195*** [1239.142]	3955.168** [1591.388]	0.110 [0.156]	0.054* [0.030]	0.599*** [0.199]	-187.557 [334.654]	0.283*** [0.072]	1.728*** [0.220]	0.067** [0.031]
MM	-7321.152 [6700.187]	-4891.420 [6753.911]	756.623 [1318.814]	-529.260 [2277.962]	0.205 [0.165]	-0.003 [0.034]	0.263 [0.230]	-172.063 [438.079]	0.215*** [0.082]	1.848*** [0.262]	0.109*** [0.042]
FL * Male	1218.423 [9474.046]	1786.270 [9320.295]	-3273.600 [2962.572]	-5158.585* [2881.762]	-0.316* [0.175]	-0.000 [0.046]	-0.031 [0.326]	-1052.647 [808.611]	-0.003 [0.102]	-0.402 [0.295]	0.025 [0.055]
(FL + MM) * Male	2395.894 [9676.062]	491.484 [9531.456]	-2889.351 [3270.029]	-3381.849 [2725.587]	-0.134 [0.184]	0.060 [0.046]	-0.223 [0.320]	-763.996 [840.867]	-0.001 [0.132]	0.250 [0.426]	0.064 [0.079]
MM * Male	12837.059 [11083.438]	8398.610 [10729.198]	-1778.315 [1858.684]	-1082.002 [2763.160]	-0.143 [0.184]	-0.056 [0.056]	-0.226 [0.362]	-908.680 [710.845]	0.014 [0.136]	0.036 [0.459]	0.058 [0.084]
Male	-4072.146 [8143.030]	-1692.097 [7908.908]	2689.004 [1625.340]	2625.455 [1796.389]	0.292** [0.141]	0.045 [0.036]	0.227 [0.227]	869.960 [720.711]	0.110 [0.084]	0.324 [0.230]	0.049 [0.044]
Lee Bounds FL	[-7627, 23609]	[-7627, 23609]	[-4949, 1800]	[-4949, 1800]	[-0.18, 0.40]	[-0.00, 0.15]	[-0.14, 1.26]	[-1034, -10]	[-0.21, 0.10]	[-0.22, 0.01]	[-0.01, 0.03]
Lee Bounds FL + MM	[-5714, 24083]	[-5714, 24083]	[-1841, 4420]	[-1841, 4420]	[-0.23, 0.48]	[-0.01, 0.14]	[-0.31, 1.04]	[-1372, 57]	[0.01, 0.54]	[1.43, 1.95]	[-0.01, 0.11]
Lee Bounds MM	[-17304, 11874]	[-17304, 11874]	[-3944, 2323]	[-3944, 2323]	[-0.18, 0.37]	[-0.11, 0.06]	[-0.22, 0.56]	[-1398, 1552]	[0.10, 0.33]	[. . .]	[. . .]
Control Group Mean	-18271.878	-18271.878	2281.861	2281.861	2.682	.635	.765	717.089	.114	.208	.005
Control Group St.d	34662.281	34662.281	3475.246	3475.246	0.767	0.174	0.926	2159.721	0.320	0.968	0.161
p-value FL = Comb	0.806	0.595	0.885	0.994	0.585	0.582	0.764	0.815	0.000	0.000	0.039
p-value MM = Comb	0.017	0.042	0.036	0.033	0.507	0.091	0.152	0.958	0.468	0.713	0.243
p-value MM = FL	0.029	0.110	0.179	0.076	0.805	0.034	0.271	0.848	0.005	0.000	0.015
p-value MM = FL = Comb	0.046	0.120	0.087	0.096	0.778	0.094	0.341	0.969	0.000	0.000	0.038
p-value MM + FL = Comb	0.296	0.369	0.836	0.854	0.165	0.779	0.530	0.648	0.476	0.404	0.348
p-value MM + FL >= Comb	0.148	0.185	0.582	0.427	0.917	0.611	0.735	0.324	0.238	0.798	0.826
Controls	NO	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
Sector Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Week Fixed Effects	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
Observations	363	363	92	92	377	373	372	144	359	74,112	74,112
Adjusted R-squared	0.005	0.018	-0.025	0.110	0.062	0.192	0.044	0.014	0.098	0.324	0.058
F-Statistic	1.388	1.245	1.901	1.308	1.534	10.251	1.969	0.465	3.733	7.803	1.601

Notes: Robust standard errors in parentheses. All models control for the dependent variable's baseline value (where possible), market fixed effects and sector fixed effects. The full set of controls include the age of the business, the type of business (store or stall), the number of employees at baseline, an index of financial numeracy, an index of book-keeping at baseline, inventory size at baseline, the entrepreneurs' previous experience as a business owner, and whether or not the entrepreneur has given/received a loan from a family member in the year prior to the intervention. Columns 10 and 11 additionally include week fixed effects. The dependent variable in models 1, 2, 5, 6, 7 and 9 correspond to its value in the end line survey (July, 2015), while models 3, 4 and 8 corresponds to its value in the follow-up survey (November, 2020). Models 10 and 11 correspond to an administrative data set from the Mobile Money operator that tracks mobile money usage and account balances from June 2014 to February 2018. ^a indicates that the outcome variable was winsorized, ^t indicates that the outcome variable was deflated to correspond to prices in 2015, and ^m indicates that that the dependent variable was log transformed. *** p<0.01, ** p<0.05, * p<0.1

Table A12: Treatment Effect on Profits and Financial Security (2020 Sample Only)

	<i>Panel A: Female Microentrepreneurs</i>					<i>Panel B: Male Microentrepreneurs</i>				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Monthly Profit 2015	Monthly Profit 2015	Monthly Profit 2020	Monthly Profit 2020	Financial Security Index	Monthly Profit 2015	Monthly Profit 2015	Monthly Profit 2020	Monthly Profit 2020	Financial Security Index
FL	2459.347 [6071.077]	5125.731 [6549.165]	512.618 [760.847]	947.011 [916.513]	0.304** [0.117]	-3712.803 [6342.866]	-3633.446 [6994.375]	166.963 [943.374]	-456.235 [967.385]	0.064 [0.149]
FL + MM	7890.089 [6361.378]	10523.313 [6730.004]	1852.226** [764.010]	2164.128** [840.929]	0.313** [0.124]	-3710.073 [5834.118]	-3994.833 [6550.584]	619.694 [1057.971]	-13.203 [1079.800]	0.164 [0.147]
MM	-3035.564 [6951.052]	-3017.494 [7078.086]	1963.020*** [730.558]	1862.264** [793.373]	0.195* [0.116]	-286.717 [5585.513]	-1050.490 [6404.748]	-880.326 [912.818]	-1497.000 [983.155]	0.163 [0.157]
Lee Bounds FL	[-8422, 14779]	[-8422, 14779]	[-2253, 1405]	[-2253, 1405]	[-0.14, 0.43]	[-8768, 21834]	[-8768, 21834]	[-1653, 2899]	[-1653, 2899]	[-0.19, 0.32]
Lee Bounds FL + MM	[-8470, 15254]	[-8470, 15254]	[-1416, 3282]	[-1416, 3282]	[-0.04, 0.52]	[-8902, 15155]	[-8902, 15155]	[-1203, 4551]	[-1203, 4551]	[-0.07, 0.34]
Lee Bounds MM	[-11636, 9981]	[-11636, 9981]	[-1005, 2645]	[-1005, 2645]	[-0.02, 0.44]	[-9237, 16252]	[-9237, 16252]	[-2668, 2176]	[-2668, 2176]	[-0.10, 0.35]
Control Group Mean	-16333.176	-17656.851	1219.375	1194.291	2.620	-13599.935	-13651.750	2449.267	2560.338	2.667
Control Group St.d	30010.470	30920.875	1669.294	1689.674	0.753	31422.865	32068.685	3669.321	3726.349	0.676
p-value FL = Comb	0.281	0.334	0.094	0.146	0.922	1.000	0.957	0.663	0.671	0.505
p-value MM = Comb	0.099	0.085	0.893	0.740	0.324	0.501	0.620	0.154	0.136	0.996
p-value MM = FL	0.394	0.253	0.102	0.380	0.326	0.562	0.711	0.227	0.183	0.544
p-value MM = FL = Comb	0.234	0.224	0.166	0.345	0.570	0.753	0.874	0.289	0.221	0.769
p-value MM + FL = Comb	0.320	0.375	0.545	0.557	0.199	0.971	0.938	0.351	0.192	0.758
p-value MM + FL >= Comb	0.160	0.188	0.727	0.722	0.901	0.486	0.469	0.175	0.096	0.621
Controls	NO	YES	NO	YES	YES	NO	YES	NO	YES	YES
Market Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Sector Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	219	207	142	139	229	192	178	137	126	200
Adjusted R-squared	-0.046	-0.054	0.009	-0.060	0.103	0.112	0.064	0.002	0.089	0.088
F-Statistic	0.969	1.067	1.845	1.120	1.596	0.567	0.458	2.360	1.845	1.750

Standard errors in brackets

* $p < .1$, ** $p < .05$, *** $p < .01$

Notes: Robust standard errors in parentheses. All models control for the dependent variable's baseline value (where possible), market fixed effects and sector fixed effects. The full set of controls include the age of the business, the type of business (store or stall), the number of employees at baseline, an index of financial numeracy, an index of book keeping at baseline, inventory size at baseline, the entrepreneurs' previous experience as a business owner, log number of productive assets at baseline, and whether or not the entrepreneur has given/received a loan from a family member in the year prior to intervention. The financial security index is based on a question about how frequently anyone in the household had gone without eating in the previous 12 months and whether the microentrepreneur had been unable to cover schooling expenses (rescaled for positive numbers). Models 1, 2, 5, 6, 7, and 10 correspond to an end line survey taken in July, 2015. Models 3, 4, 8 and 9 correspond to a follow-up survey undertaken in November, 2020. ^a indicates that the outcome variable was winsorized and ^t indicates that the outcome variable was deflated to correspond to prices in 2015 *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table A13: Mechanisms, Female Entrepreneurs (2020 Sample Only)

OUTCOMES	Panel A: Business Practices				Panel B: Mobile Money Usage			
	(1) Financial Literacy Index	(2) Numerical Literacy Index	(3) Book- Keeping Index	(4) Remit. To Family ^f	(5) Reports Using Mkesh	(6) Reported Mkesh Savings ^m	(7) Weekly Mkesh Balance ^m	(8) Weekly Transaction Value ^m
Treatment Condition								
FL	0.039 [0.036]	0.007 [0.040]	0.323 [0.243]	-145.389 [96.754]	-0.092 [0.072]	-2.035 [3.343]	0.064 [0.172]	0.037 [0.043]
FL + MM	0.072** [0.033]	0.001 [0.041]	0.311 [0.225]	-139.816 [87.295]	0.137* [0.081]	-1.839 [2.448]	1.916*** [0.254]	0.030 [0.029]
MM	0.022 [0.032]	-0.059 [0.043]	0.136 [0.218]	-193.558 [133.732]	0.147* [0.077]	-3.648 [2.287]	2.181*** [0.269]	0.095** [0.042]
Lee Bounds FL	[-0.06, 0.17]	[-0.06, 0.18]	[-0.44, 0.88]	[-399, 2]	[-0.30, 0.07]	[-4.16, 5.34]	[0.01, 0.10]	[0.02, 0.06]
Lee Bounds FL + MM	[-0.04, 0.20]	[-0.14, 0.17]	[-0.78, 1.05]	[-424, 26]	[-0.21, 0.47]	[-4.42, 6.25]	[1.41, 2.03]	[-0.03, 0.05]
Lee Bounds MM	[-0.04, 0.13]	[-0.15, 0.08]	[-0.41, 0.65]	[-423, 747]	[-0.05, 0.37]	[-3.81, 5.30]	[2.18, 2.36]	[0.08, 0.13]
Control Group Mean	0.600	0.803	0.860	262.870	0.122	2.710	0.108	0.021
Control Group St.d	0.168	0.190	1.050	1054.909	0.331	2.986	0.592	0.413
p-value FL = Comb	0.322	0.868	0.960	0.918	0.004	0.922	0.000	0.864
p-value MM = Comb	0.110	0.147	0.410	0.564	0.909	0.187	0.414	0.084
p-value MM = FL	0.631	0.108	0.422	0.600	0.003	0.405	0.000	0.312
p-value MM = FL = Comb	0.261	0.230	0.640	0.844	0.002	0.374	0.000	0.223
p-value MM + FL = Comb	0.809	0.337	0.640	0.188	0.452	0.283	0.363	0.064
p-value MM + FL >= Comb	0.404	0.168	0.680	0.094	0.226	0.142	0.818	0.968
Controls	YES	YES	YES	YES	YES	YES	YES	YES
Market Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
Sector Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
Week Fixed Effects	NO	NO	NO	NO	NO	NO	YES	YES
Observations	226	230	225	219	214	46	44,969	44,969
Adjusted R-squared	0.073	0.048	0.017	0.063	0.123	-0.027	0.378	0.046
F-Statistic	1.696	0.851	1.189	0.552	2.404	3.708	6.850	1.297

Notes: Robust standard errors in parentheses. All models control for the dependent variable's baseline value (where possible), marked fixed effects, sector fixed effects, the age of the business, the type of business (store or stall), the number of employees at baseline, an index of financial numeracy, inventory size at baseline, the entrepreneurs' previous experience as a business owner, and whether or not the entrepreneur has given/received a loan from a family member in the year prior to intervention. Columns 7 and 8 additionally include week fixed effects. The dependent variable in models 1, 2, 3, 5, and 6 correspond to its value in the end line survey (July, 2015), while model 4 corresponds to its value in the follow-up survey (November, 2020). Models 7 and 8 correspond to an administrative data set from the Mkesh operator that tracks mobile money usage and account balances from June 2014 to February 2018. ^a indicates that the outcome variable was winsorized, ^f indicates that the outcome variable was deflated to correspond to prices in 2015, and ^m indicates that that the dependent variable was log transformed. *** p<0.01, ** p<0.05, * p<0.1

Table A14: Unmatched Male and Female Entrepreneurs, (2020 Sample Only)

OUTCOMES	Panel A: Profit					Panel B: Mechanisms					
	(1) Monthly Profit 2015 ^a	(2) Monthly Profit 2015 ^a	(3) Monthly Profit 2020 ^{at}	(4) Monthly Profit 2020 ^{at}	(5) Financial Security Index 2015	(6) Financial Literacy Index	(7) Book-Keeping Index	(8) Remit. To Family ^f	(9) Reports Using Mkesh	(10) Weekly Mkesh Balance ^m	(11) Weekly Transaction Value ^m
Treatment Condition											
Male	1148.951 [6314.260]	3590.728 [6737.755]	1114.190 [733.327]	1469.408* [777.746]	0.091 [0.137]	0.076** [0.029]	0.050 [0.232]	309.439 [254.934]	-0.005 [0.076]	0.104 [0.164]	-0.016 [0.028]
FL	1695.794 [5626.281]	2301.102 [6125.149]	136.485 [660.773]	262.706 [673.869]	0.278** [0.117]	0.059* [0.032]	0.380 [0.233]	-180.156 [124.066]	-0.083 [0.067]	0.045 [0.156]	0.010 [0.051]
FL + MM	5628.248 [5694.344]	6369.447 [5900.797]	1456.524** [734.110]	1616.651** [755.603]	0.231* [0.121]	0.077** [0.030]	0.315 [0.216]	-105.398 [139.640]	0.151** [0.076]	1.879*** [0.253]	0.028 [0.027]
MM	-3895.474 [6801.551]	-4929.294 [7201.245]	1218.969* [738.879]	879.829 [749.754]	0.215* [0.126]	0.026 [0.031]	0.154 [0.214]	-234.010 [143.868]	0.156** [0.074]	2.162*** [0.271]	0.074 [0.048]
FL * Male	-4667.524 [8307.038]	-6717.889 [8959.329]	330.056 [1046.898]	-119.957 [1080.345]	-0.274 [0.176]	-0.007 [0.042]	-0.042 [0.318]	613.681 [522.769]	0.044 [0.104]	0.114 [0.243]	0.044 [0.066]
(FL + MM) * Male	-8873.726 [8069.646]	-11118.358 [8949.986]	-93.297 [1197.710]	-486.858 [1249.426]	-0.104 [0.177]	-0.011 [0.043]	-0.243 [0.331]	-394.227 [309.217]	0.038 [0.124]	0.152 [0.393]	0.042 [0.036]
MM * Male	2088.192 [8897.912]	-389.680 [9508.332]	-1652.001 [1089.971]	-1760.463 [1129.248]	-0.110 [0.183]	-0.086* [0.044]	-0.299 [0.312]	-188.111 [285.994]	0.031 [0.117]	-0.062 [0.392]	0.085 [0.084]
Lee Bounds FL	[-12269, 17622]	[-12579, 17469]	[-1347, 1469]	[-1404, 1551]	[-0.07, 0.45]	[-0.02, 0.13]	[-0.26, 0.89]	[-2581, 661]	[-0.24, 0.06]	[-0.02, 0.12]	[-0.02, 0.05]
Lee Bounds FL + MM	[-7907, 14893]	[-8343, 15275]	[-369, 2361]	[-420, 2663]	[0.02, 0.43]	[0.00, 0.14]	[-0.27, 0.67]	[-478, 398]	[0.00, 0.34]	[1.81, 2.02]	[0.04, 0.07]
Lee Bounds MM	[-12460, 7547]	[-12546, 8740]	[-1262, 2068]	[-1546, 2013]	[-0.10, 0.42]	[-0.10, 0.05]	[-0.50, 0.26]	[-538, 177]	[0.07, 0.35]	[2.13, 2.37]	[0.14, 0.18]
Control Group Mean	-15037	-15720.319	1937.024	1971.32	2.644	0.632	0.92	404.987	0.16	0.167	0.014
Control Group St.d	30558.165	31369.904	3133.906	3174.848	0.712	0.165	1.107	1397.844	0.368	0.761	0.323
p-value FL = Comb	0.406	0.412	0.058	0.062	0.570	0.549	0.771	0.452	0.002	0.000	0.723
p-value MM = Comb	0.133	0.101	0.758	0.359	0.888	0.074	0.444	0.256	0.957	0.410	0.294
p-value MM = FL	0.379	0.288	0.140	0.413	0.554	0.290	0.318	0.581	0.002	0.000	0.308
p-value MM = FL = Comb	0.310	0.254	0.124	0.173	0.778	0.198	0.575	0.521	0.001	0.000	0.512
p-value MM + FL = Comb	0.342	0.315	0.919	0.643	0.084	0.842	0.480	0.074	0.459	0.373	0.409
p-value MM + FL >= Comb	0.171	0.158	0.459	0.321	0.958	0.579	0.760	0.037	0.230	0.814	0.796
Controls	NO	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
Market Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Sector Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Week Fixed Effects	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
Observations	411	385	318	303	429	493	422	468	410	83,762	83,762
Adjusted R-squared	0.028	0.026	0.013	0.050	0.077	0.090	0.063	0.031	0.104	0.338	0.067
F-Statistic	0.539	0.755	2.006	1.874	1.756	3.451	1.916	0.755	2.426	8.069	1.399

Notes: Robust standard errors in parentheses. All models control for the dependent variable's baseline value (where possible), marked fixed effects and sector fixed effects. The full set of controls include the age of the business, the type of business (store or stall), the number of employees at baseline, an index of financial numeracy, inventory size at baseline, the entrepreneurs' previous experience as a business owner, and whether the entrepreneur has given/received a loan from a family member in the year prior to intervention. Columns 10 and 11 additionally include week fixed effects. The dependent variable in models 1, 2, 5, 6, 7 and 9 correspond to its value in the end line survey (July, 2015), while models 3, 4 and 8 corresponds to its value in the follow-up survey (November, 2020). Models 10 and 11 correspond to an administrative data set from the Mkesh operator that tracks mobile money usage and account balances from June 2014 to February 2018. ^a indicates that the outcome variable was winsorized, ^f indicates that the outcome variable was deflated to correspond to prices in 2015, and ^m indicates that that the dependent variable was log transformed. *** p<0.01, ** p<0.05, * p<0.1

Table A15: Mechanisms, Male Entrepreneurs

OUTCOMES	Panel A: Business Practices				Panel B: Mobile Money Usage			
	(1) Financial Literacy Index	(2) Numerical Literacy Index	(3) Book- Keeping Index	(4) Remit. To Family ^t	(5) Reports Using MM	(6) Reported MM Savings ^m	(7) Weekly MM Balance ^m	(8) Weekly Transaction Value ^m
Treatment Condition								
FL	0.076*** [0.021]	0.006 [0.024]	0.386** [0.150]	662.107 [624.976]	0.001 [0.050]	-0.762 [0.832]	-0.024 [0.120]	0.024 [0.020]
FL + MM	0.076*** [0.023]	-0.011 [0.024]	0.427*** [0.157]	-401.096 [374.613]	0.380*** [0.061]	0.068 [0.704]	1.908*** [0.189]	0.112*** [0.029]
MM	-0.019 [0.023]	-0.010 [0.025]	-0.062 [0.143]	-297.320 [401.592]	0.242*** [0.060]	-0.426 [0.702]	2.023*** [0.180]	0.112*** [0.025]
Lee Bounds FL	[0.03, 0.13]	[-0.07, 0.12]	[-0.32, 0.99]	[-1103, 1427]	[-0.18, 0.07]	[-2.70, 1.71]	[-0.24, 0.03]	[-0.01, 0.03]
Lee Bounds FL + MM	[0.05, 0.13]	[-0.06, 0.07]	[-0.05, 0.77]	[-999, 709]	[0.21, 0.49]	[-3.08, 4.72]	[1.78, 1.94]	[-0.01, 0.12]
Lee Bounds MM	[-0.06, 0.04]	[-0.09, 0.09]	[-0.67, 0.30]	[-914, 305]	[0.12, 0.42]	[-3.68, 3.88]	[1.87, 2.21]	[-0.01, 0.18]
Control Group Mean	0.652	0.834	0.963	701.867	0.147	3.115	0.231	0.006
Control Group St.d	0.178	0.186	1.113	1911.859	0.356	2.225	0.970	0.182
p-value FL = Comb	0.984	0.498	0.790	0.057	0.000	0.283	0.000	0.010
p-value MM = Comb	0.000	0.960	0.001	0.738	0.036	0.365	0.618	0.983
p-value MM = FL	0.000	0.538	0.001	0.043	0.000	0.632	0.000	0.003
p-value MM = FL = Comb	0.000	0.754	0.001	0.119	0.000	0.507	0.000	0.004
p-value MM + FL = Comb	0.518	0.845	0.625	0.321	0.102	0.231	0.724	0.554
p-value MM + FL >= Comb	0.259	0.577	0.312	0.839	0.051	0.115	0.638	0.723
Controls	YES	YES	YES	YES	YES	YES	YES	YES
Market Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
Sector Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
Observations	513	517	501	183	448	150	100,360	100,360
Adjusted R-squared	0.059	0.039	0.063	0.005	0.149	0.082	0.330	0.088
F-Statistic	3.750	1.614	2.434	0.900	5.805	5.174	10.261	1.778

Notes: Robust standard errors in parentheses. All models control for the dependent variable's baseline value (where possible), market fixed effects, sector fixed effects, the age of the business, the type of business (store or stall), the number of employees at baseline, an index of financial numeracy, inventory size at baseline, the entrepreneurs' previous experience as a business owner, and whether or not the entrepreneur has given/received a loan from a family member in the year prior to intervention. The dependent variable in models 1, 2, 3, 5, and 6 correspond to its value in the end line survey (July, 2015), while model 4 corresponds to its value in the follow-up survey (November, 2020). Models 7 and 8 correspond to an administrative data set from the mobile money operator that tracks mobile money usage and account balances from June 2014 to February 2018. ^t indicates that the outcome variable was deflated to correspond to prices in 2015, and ^m indicates that that the dependent variable was log transformed. *** p<0.01, ** p<0.05, * p<0.1

Table A16: Mechanisms, Male Entrepreneurs (2020 Sample Only)

OUTCOMES	Panel A: Business Practices				Panel B: Mobile Money Usage			
	(1) Financial Literacy Index	(2) Numerical Literacy Index	(3) Book- Keeping Index	(4) Remit. To Family ^f	(5) Reports Using Mkesh	(6) Reported Mkesh Savings ^m	(7) Weekly Mkesh Balance ^m	(8) Weekly Transaction Value ^m
Treatment Condition								
FL	0.048* [0.028]	-0.018 [0.040]	0.367 [0.237]	662.107 [624.976]	-0.051 [0.079]	-0.767 [1.999]	0.268 [0.206]	0.083* [0.043]
FL + MM	0.063* [0.033]	-0.020 [0.042]	0.094 [0.263]	-401.096 [374.613]	0.191* [0.100]	0.693 [1.678]	2.008*** [0.296]	0.093*** [0.028]
MM	-0.054 [0.035]	-0.032 [0.042]	-0.027 [0.254]	-297.320 [401.592]	0.179* [0.095]	2.022 [1.606]	2.187*** [0.289]	0.098** [0.041]
Lee Bounds FL	[-0.04, 0.12]	[-0.14, 0.09]	[-0.48, 1.16]	[-1103, 1427]	[-0.34, 0.10]	[-2.52, 3.03]	[-0.05, 0.18]	[-0.01, 0.06]
Lee Bounds FL + MM	[-0.02, 0.16]	[-0.15, 0.08]	[-0.47, 0.91]	[-999, 709]	[-0.03, 0.56]	[-1.72, 3.53]	[1.77, 2.17]	[0.06, 0.09]
Lee Bounds MM	[-0.16, 0.03]	[-0.16, 0.03]	[-0.71, 0.55]	[-914, 305]	[0.02, 0.44]	[0.08, 4.61]	[2.06, 2.44]	[0.20, 0.24]
Control Group Mean	0.692	0.859	0.980	701.867	0.192	3.068	0.262	0.008
Control Group St.d	0.123	0.176	1.169	1911.859	0.398	2.114	0.947	0.211
p-value FL = Comb	0.681	0.973	0.301	0.057	0.016	0.429	0.000	0.821
p-value MM = Comb	0.004	0.803	0.659	0.738	0.912	0.226	0.642	0.907
p-value MM = FL	0.005	0.765	0.118	0.043	0.014	0.127	0.000	0.788
p-value MM = FL = Comb	0.006	0.951	0.274	0.119	0.012	0.221	0.000	0.963
p-value MM + FL = Comb	0.167	0.623	0.500	0.321	0.647	0.803	0.301	0.124
p-value MM + FL >= Comb	0.083	0.312	0.750	0.839	0.323	0.598	0.850	0.938
Controls	YES	YES	YES	YES	YES	YES	YES	YES
Market Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
Sector Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
Observations	198	203	197	183	198	49	39,179	39,179
Adjusted R-squared	0.064	0.009	0.120	0.005	0.084	0.085	0.384	0.138
F-Statistic	7.164	0.857	2.658	0.900	1.917	1.980	9.098	2.185

Notes: Robust standard errors in parentheses. All models control for the dependent variable's baseline value (where possible), marked fixed effects, sector fixed effects, the age of the business, the type of business (store or stall), the number of employees at baseline, an index of financial numeracy, inventory size at baseline, the entrepreneurs' previous experience as a business owner, and whether or not the entrepreneur has given/received a loan from a family member in the year prior to intervention. The dependent variable in models 1, 2, 3, 5, and 6 correspond to its value in the end line survey (July, 2015), while model 4 corresponds to its value in the follow-up survey (November, 2020). Models 7 and 8 correspond to an administrative data set from the Mkesh operator that tracks mobile money usage and account balances from June 2014 to February 2018. ^a indicates that the outcome variable was winsorized, ^f indicates that the outcome variable was deflated to correspond to prices in 2015, and ^m indicates that that the dependent variable was log transformed. *** p<0.01, ** p<0.05, * p<0.1

Table A17: Share Of Mobile Money Transactions Across Experimental Groups

	Total	Airtime	Checking Balance	Deposit	Withd.	Remote Pay- ment	Transfer Sent	Transfer Re- ceived	Reversal
Full Sample									
Control (N=286)	885	3.62%	0.45%	13.22%	1.13%	70.85%	8.93%	1.81%	0.00%
FL (N=325)	943	16.12%	2.12%	32.77%	7.53%	34.89%	3.08%	2.01%	0.42%
Combined(N=325)	4511	23.90%	3.37%	25.43%	4.41%	39.64%	2.50%	0.75%	0.00%
MM (N=333)	4910	14.81%	4.62%	32.81%	4.81%	39.23%	2.75%	0.84%	0.14%
Male									
Control (N=132)	69	26.09%	4.35%	37.68%	0.00%	26.09%	1.45%	4.35%	0.00%
FM (N=150)	491	19.96%	1.43%	26.88%	0.81%	43.79%	4.89%	2.24%	0.00%
Combined (N=141)	2513	3.02%	16.35%	22.32%	1.31%	54.20%	2.03%	0.76%	0.00%
MM (N=153)	3112	11.21%	3.50%	35.15%	6.88%	39.91%	2.15%	0.96%	0.22%
Female									
Control (N=154)	816	1.72%	0.12%	11.15%	1.23%	74.63%	9.56%	1.59%	0.00%
FL (N=175)	452	11.95%	2.88%	39.16%	14.82%	25.22%	3.32%	1.77%	0.88%
Combined (N=184)	1998	33.38%	3.80%	29.33%	8.31%	21.32%	3.10%	0.75%	0.00%
MM (N=180)	1798	21.02%	6.56%	28.75%	1.22%	38.04%	3.78%	0.61%	0.00%
Total	11249	17.68%	3.58%	28.30%	4.59%	41.51%	3.25%	0.98%	0.10%

Source: Administrative data from the mobile money operator.

Table A18: Descriptive Statistics of Matched and Unmatched Samples

	(1) Matched Sample				(2) Un-Matched Sample				(3) Difference	
	mean	p25	p75	sd	mean	p25	p75	sd	b	p
% Store	0.506	0.000	1.000	0.501	0.382	0.000	1.000	0.486	-0.124	(0.000)
% Owns Business	0.890	1.000	1.000	0.313	0.884	1.000	1.000	0.320	-0.006	(0.739)
Initial Investment (win)	18891.167	2400.000	15000.000	36701.600	14923.678	1500.000	15000.000	30026.657	-3967.489	(0.082)
% Business Has Space For Inventory	0.498	0.000	1.000	0.501	0.607	0.000	1.000	0.489	0.110	(0.000)
Inventory Levels (win)	12.680	5.000	15.000	13.516	20.847	4.000	20.000	37.059	8.167	(0.000)
Establishment Age	108.829	36.000	168.000	88.973	123.227	36.000	180.000	112.779	14.397	(0.008)
Number of Employees	0.596	0.000	1.000	1.007	0.462	0.000	1.000	0.915	-0.134	(0.017)
% Female	0.442	0.000	1.000	0.497	0.454	0.000	1.000	0.498	0.013	(0.648)
% Was Previously a Vendor	0.460	0.000	1.000	0.499	0.436	0.000	1.000	0.496	-0.025	(0.383)
% Owns Another Business	0.005	0.000	0.000	0.068	0.053	0.000	0.000	0.225	0.049	(0.000)
% Played Lottery in last 12 Month	0.133	0.000	0.000	0.340	0.111	0.000	0.000	0.315	-0.022	(0.249)
Risk Aversion Index	0.886	1.000	1.000	0.459	0.785	1.000	1.000	0.607	-0.101	(0.002)
Financial literacy Index	0.849	0.750	1.000	0.186	0.854	0.750	1.000	0.198	0.005	(0.639)
% Uses Book-Keeping	0.255	0.000	1.000	0.436	0.263	0.000	1.000	0.440	0.008	(0.751)
Total Expenditure Last Month (win)	29864.038	10038.539	39830.645	26963.678	23487.427	6392.990	29859.705	25575.310	-6376.612	(0.000)
Total Sales Last Month (win)	41698.775	14963.108	62130.553	33044.922	23988.620	6368.382	31065.276	25748.075	-17710.155	(0.000)
Number of Productive Assests (win)	6.425	1.000	8.000	7.078	4.676	1.000	6.000	6.264	-1.749	(0.000)
Number of Clients Past 3 Days	24.567	10.333	30.000	21.945	21.464	9.333	27.667	20.752	-3.103	(0.018)
Observations	428				1159				1587	

1 Figures

Figure A1: Business Illustrations



Notes: Left panel illustrates a stall in the market and Right panel illustrates a store.

Figure A2: Reported Savings Objectives At Baseline By Gender

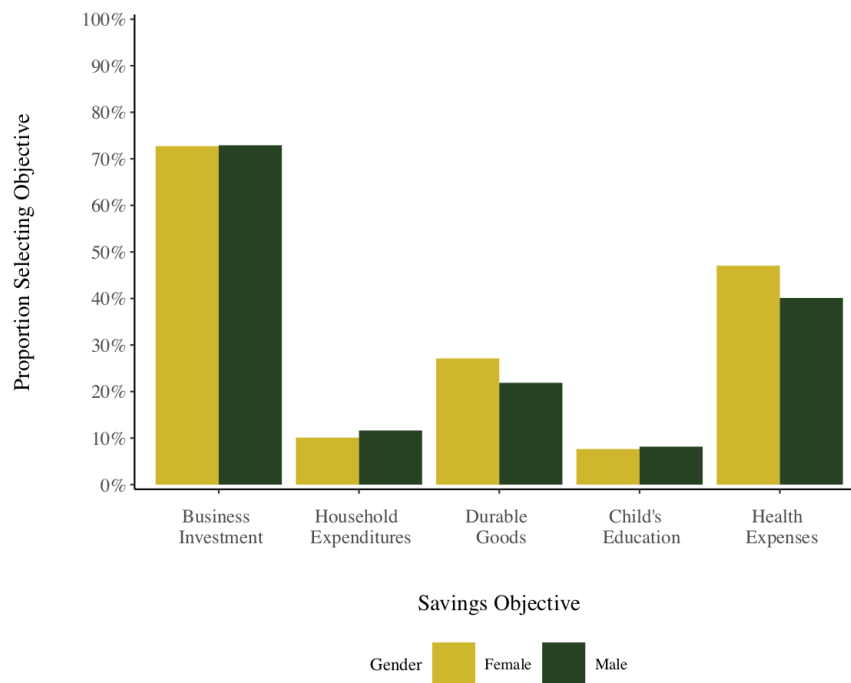


Figure A3: Propensity Scores Of Female and Male microenterprises

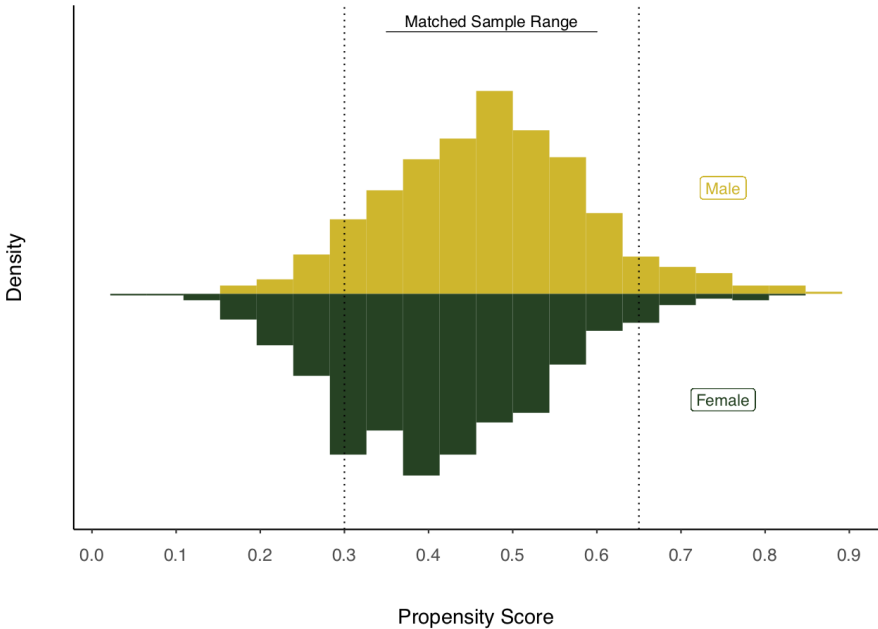


Figure A4: Closing the Gender Gap on Profit, Mobile Money Treatment

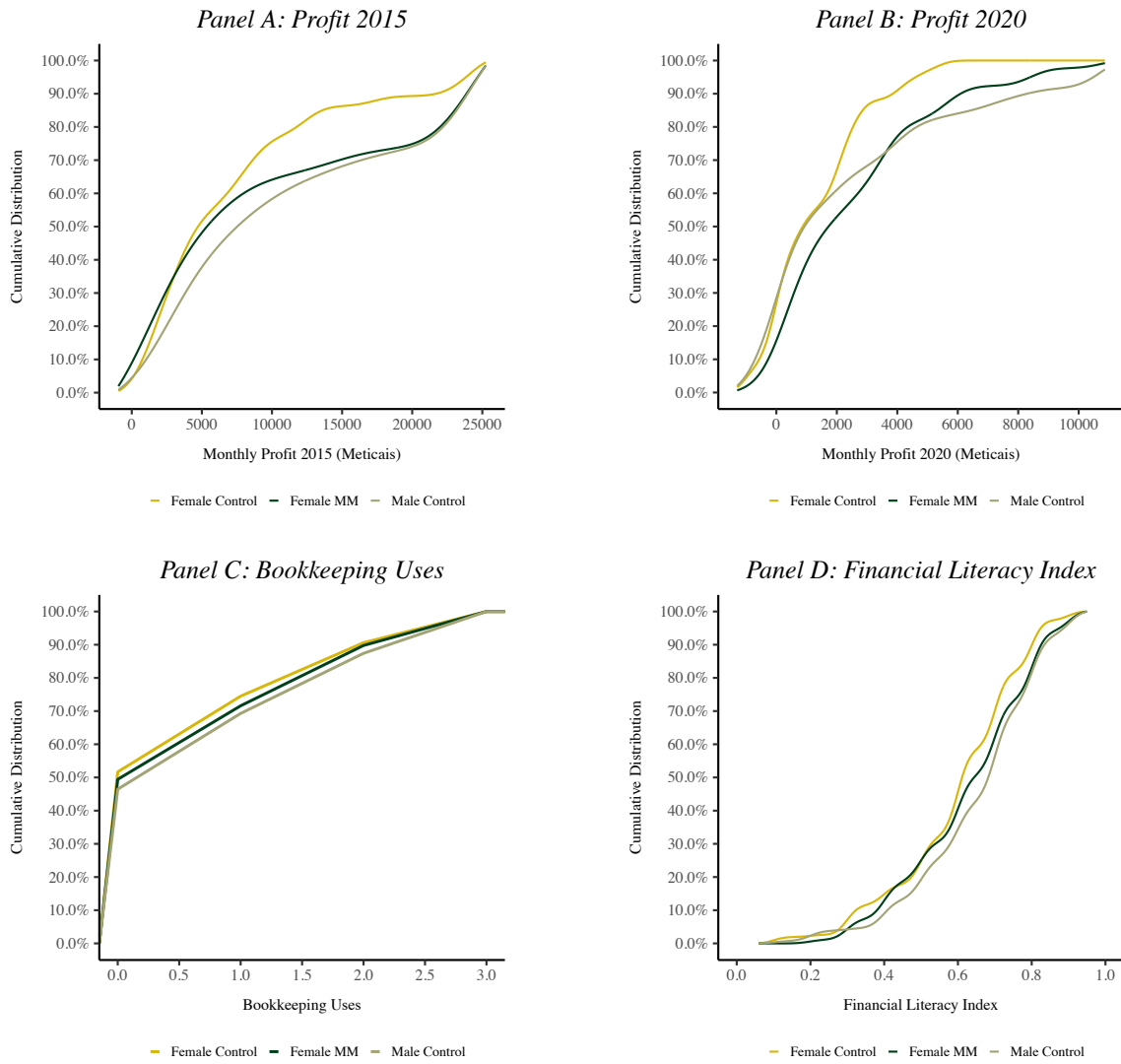


Figure A5: Closing the Gender Gap on Profit, Combined Treatment, against Male Treatment

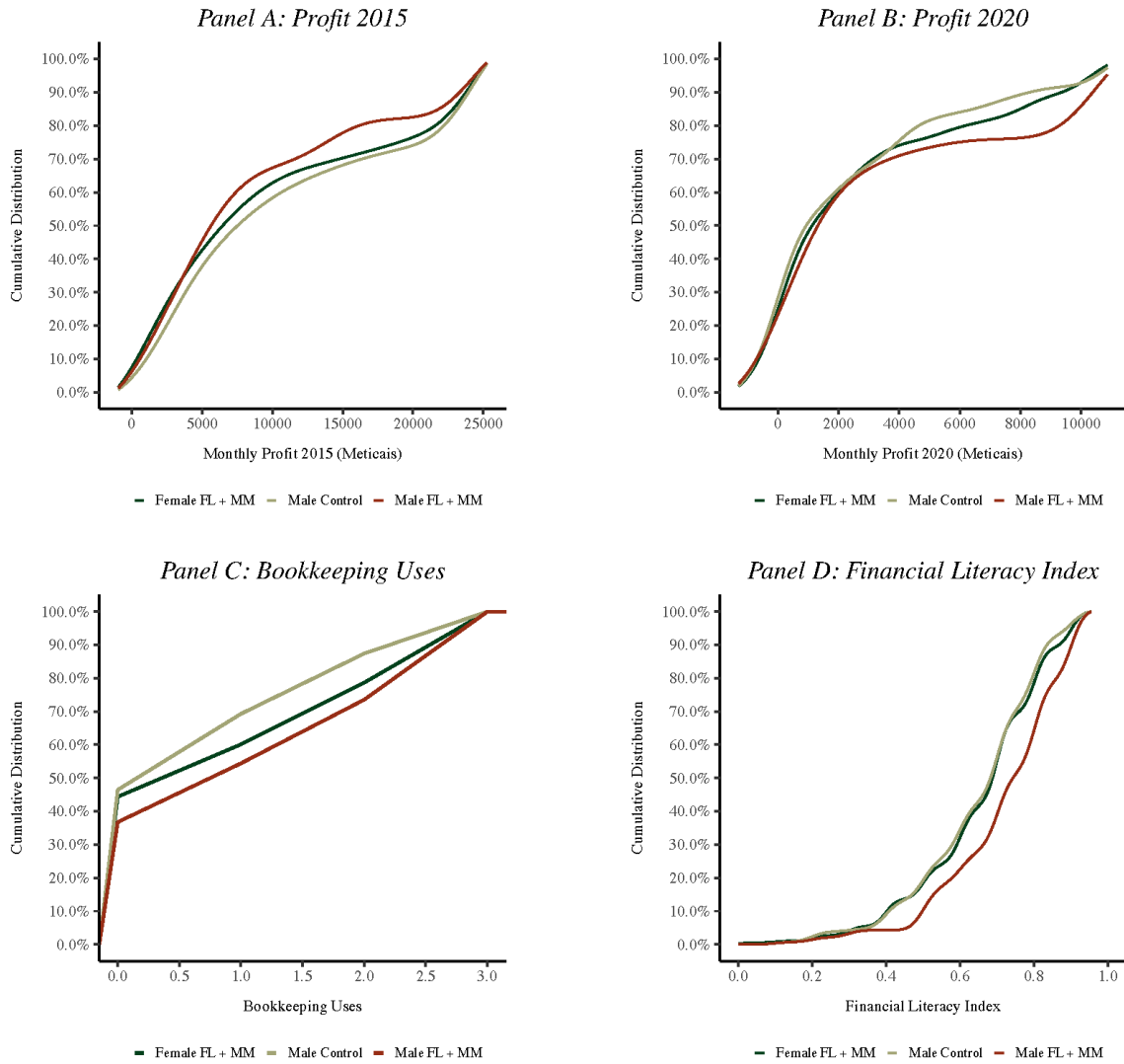


Figure A6: Front Cover Of The Manual Designed To Support Financial Management Training



**MANUAL DE FORMAÇÃO DOS MICRO-EMPRESÁRIOS NOS
MERCADOS URBANOS DA CIDADE DE MAPUTO**



Training Manual for microentrepreneurs Operating in the Urban Markets of the City of Maputo

Figure A7: Outline Of the Topics Covered in The Manual Designed To Support Financial Management Training

Tabela de Conteúdos

1. Introdução
2. Receitas e despesas – como calcular o lucro do negócio?
3. Como calcular o lucro do negócio? Alguns avisos e exemplos.
4. Poupança: o que fazer com o dinheiro?
5. Poupança: evitar voltar para trás
6. Investimento: o que é? Como conseguir dinheiro para investir?
7. Investimento: quando pedir emprestado (tænecar) dinheiro?
8. Investimento: a que taxa de juro peço emprestado?
9. Orçamento: o que é e como se deve fazer?

Contents: 1. Introduction, 2. Revenues and Expenditures - how to calculate profit?, 3. How to calculate profit? Some Examples, 4. Savings: what to do with your money, 5. Savings: saving your business, 6. Investment: what is it? How to get money to invest?, 7. Investment: when to ask for a loan?, 8. Investment: what is the right interest rate?, 9. Budget: what is it and how can you prepare one?

Figure A8: Example of Manual Content: Savings and How to Manage your Money

4. Poupança: o que fazer com o dinheiro?

O que é a poupança? É a parte do lucro líquido que não utilizamos		
Tipo de poupança	Vantagens	Desvantagens
Xitique	<ul style="list-style-type: none"> ✓ Você não tem que sair do mercado para fazer poupança 	<ul style="list-style-type: none"> x Xitique pode trazer problemas, porque você entrega as suas poupanças. Quando chega a tua vez nem todos entregam e você perde x As vezes há um cobrador do Xitique que pode desaparecer com todo dinheiro do Xitique e todos ficam a perder x O Xitique não dá juro
mKesh	<ul style="list-style-type: none"> ✓ É seguro ✓ Não precisa ir para longe para guardar dinheiro, há sempre um agente mKesh por perto ✓ Pode usar o seu dinheiro no mKesh para fazer compras em alguns sítios 	<ul style="list-style-type: none"> x Não paga juro
Banco	<ul style="list-style-type: none"> ✓ É seguro ✓ Paga juros ✓ Se cair o banco pode te emprestar dinheiro com um bom juro 	<ul style="list-style-type: none"> x Você tem largar o seu negócio e formar bicha no banco

What are savings? It is the portion of the net profit that we do not spend. Types of Savings: 1) Savings Groups (Xitique): advantages – you do not have to leave the market to save; disadvantages –Xitique can be risky because while you contribute with your money, when it is your turn to get it not everyone will pay and you lose out.; 2) Mobile Money: advantages – it is safe, you do not have to walk far to reach the money as there is always an agent in the market, you can use these savings ot make purchases; disadvantages – it does not pay (long-term)interest; 3) Bank: advantages – it is safe, pays interests, and the bank can provide you loans if you need one; disadvantages – you have to leave your business and queue at a far away Bank to access your money or to make deposits.

Figure A9: Example of Financial Management Training on How to Manage the Family Tax

5. Poupança: evitar voltar para trás

O que faz voltar para trás: Os pedidos da família e amigos

1

- Depois de fazer boas poupanças, quando está pensar no investimento vem um familiar com dificuldades
- Se tirar as suas poupanças para ajudar você volta para “estaca zero”



2

- Enquanto você não estiver bem, não vale a pena ajudar a família, porque vai cair
- Se não tiver cuidado até pode ficar sem dinheiro para fazer compras e ser você a precisar de ajuda



3

- Primeiro é preciso poupar, investir para o negócio crescer. Quando já tiver bons lucros e boa poupança pode ver os pedidos da família, mas tenha cuidado!



Ao receber um pedido da família, diz que está dever dinheiro ao banco, todas as semas tem ir pagar uma letra e se você não pagar o banco vai levar tudo na sua casa

Savings: Avoid Losing your Business. How can you lose your business? Requests for transfers by family and friends

After putting money aside for your savings, when you are considering an investment in your business, you are approached by a relative requesting money. If you remove this from your savings you might return to square one. Unless you have considerable profits, helping others might compromise your own business. If you are not careful you might be the one who runs out of money to purchase goods for your shop and you will be the one who will have to ask for help. First it is important to save and invest for the business to grow. Once you have stable profits and savings, you can help others in the family!

Figure A10: Example of Financial Management Training Manual: How To Prepare A Budget.

9. Orçamento: o que é e como se deve fazer?

4 Passos para fazer um Orçamento!

2 Prever as Compras – Como calcular?

- Depois de prever as vendas, faz-se a previsão das compras necessárias;
- Quando fazemos a previsão das compras, não nos podemos esquecer que os preços podem variar.

Exemplo: O Senhor Ezequiel já calculou as vendas do próximo mês. No próximo mês, vai ter de comprar 100 sacos de batata para vender na sua banca.

- Actualmente o Sr. Ezequiel compra o saco de batatas a 240MT. Ao analisar o comportamento dos preços nos últimos 3 meses, como fizemos no passo 1, esperamos que no próximo mês o preço aumente para 245MT.
 - $\text{Compras} = \text{Preço por saco} \times \text{número de sacos necessários}$
 - Exemplo: $245\text{MT} \times 100 \text{ sacos} = 24.500\text{MT}$
- O Sr. Ezequiel vai gastar 24.500MT para comprar a sua mercadoria



Budget: what is it and how do you prepare one? Four Steps to preparing a budget

Estimating Shopping Expenditures - how to calculate it?

- Once you estimate and predict your sales, you can predict what would be the required purchases. When you are predicting purchases, remember that prices might vary!
- Example: Mr Ezequiel already estimated his sales for next month. Next month he will have to buy 100 bags of potatoes to sell in his stall. At present, Mr Ezequiel buys each potato bag at 240 MT. He expects prices to increase to 245 MT in the next 3 months. $\text{Purchases} = \text{Price per bag} \times \text{Number of Bags that are needed}$. Example: $245 \text{ MT} \times 100 \text{ bags} = 24500 \text{ MT}$. Mr Ezequiel will spend 24,500 MT to buy his stock.

Figure A12: Example Of The Comic Book Designed To Help Teach Key Financial Concepts



Character A: “Joana, You know, I used all of yesterday’s money to go to the wholesale market and for our breakfast. Can you pay for my transport today? I don’t know what we will eat tonight if I don’t go to the market and sell today.”

Character B: “We learned last week that we are not supposed to use the money from the business for household expenses. You shouldn’t have used yesterday’s revenue for breakfast. If you separate correctly the money from the business and your household expenses you will never need money for transport or food.”

Figure A13: Example Of The Comic Book Designed To Help Teach Key Financial Concepts



Character A: "I don't believe you. The next thing you are going to tell me is that they also give you interest. But why don't you save your money in the savings group or at the Bank?"

Character B: "The Bank is always packed and it is far away. By the time I leave the market it is already closed. Here I know I have my agent close by. I have had many problems with the savings group (xitique). When it is my turn to get the money I am not paid. Enough."